XR-5250

SERVICE MANUAL

US Model
AEP Model
E Model

Model Name Using Similar Mechanism	XR-5150/5151/5152
Tape Transport Mechanism Type	MG-707AV-35

SPECIFICATIONS

Power amplifier section

Outputs — Speaker outputs (sure seal connectors)
Speaker impedance — 4 – 8 ohms
Maximum power output
25 W × 2 (at 4 ohms)*
15 W × 4 (at 4 ohms)*
*Measured at 14.4 V

Cassette player section

Tape track — 4-track 2-channel stereo
Frequency response — 30 – 16,000 Hz
Signal-to-noise ratio

Cassette type	Dolby B	Dolby off
TYPE II, IV	66 dB	58 dB
TYPE I	63 dB	55 dB

Wow and flutter — 0.13% (WRMS)

Tuner section

System — Superheterodyne tuner
Computerized quartz-locked synthesizer system
Antenna terminal — External antenna connector

FM tuner section

Tuning range — 87.5 – 108.0 MHz
Intermediate frequency — 10.7 MHz
Usable sensitivity — 13 dBf (75 ohms)
Selectivity — 75 dB at 400 kHz
Signal-to-noise ratio — 66 dB (stereo), 69 dB (mono)
Harmonic distortion at 1 kHz — 0.9% (stereo), 0.5% (mono)
Separation — 35 dB at 1 kHz
Frequency response — 30 – 15,000 Hz
Capture ratio — 2 dB

AM tuner section

Tuning range
European and other countries
531 – 1,602 kHz (at 9 kHz step)
North and South American countries
530 – 1,620 kHz (at 10 kHz step)
AM tuning interval 9kHz/10kHz switchable (except for the model for European countries)
Intermediate frequency — 450 kHz
Sensitivity — 35μV

— Continued on next page —

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
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FM/AM CASSETTE CAR STEREO

SONY®

General

Tone controls	Bass ±8 dB at 100 Hz Treble ±8 dB at 10 kHz
Loudness	+10 dB at 100 Hz +6 dB at 10 kHz
Output lead	Power antenna relay control lead
Power requirements	12 V DC car battery (negative ground)
Dimensions	Approx. 178 × 50 × 154 mm (w/h/d) not incl. projecting parts and controls
Mounting dimensions	XR-5250 Approx. 182 × 53 × 145 mm (w/h/d) XR-5240 Approx. 178 × 50 × 137 mm (w/h/d) not incl. projecting parts and controls
Weight	XR-5250 Approx. 1.4 kg XR-5240 Approx. 1.3 kg
Accessories supplied	Mounting hardware (1 set)

Design and specifications subject to change without notice.

Note for Lithium Battery

CAUTION

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the equipment manufacturer. Discard used batteries according to manufacturer's instructions

ADVARSEL !

Lithiumbatteri-Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri
af samme fabrikat og type.
Lever det brugte batteri tilbage til leverandøren.

ADVARSEL

Lithiumbatteri-Eksplosjonsfare.
Ved utskifting benyttes kun batteri som
anbefalt av apparatfabrikanten.
Brukt batteri returneres apparatleverandøren.

VARNING

Explosionsfara vid felaktigt batteribyte. Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren. Kassera använt batteri enligt fabrikantens instruktion.

VAROITUS

Paristo voi räjätää, jos se on virheellisesti asennettu Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

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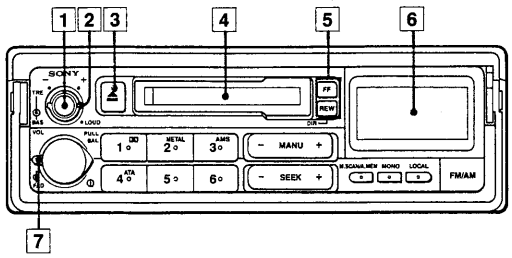
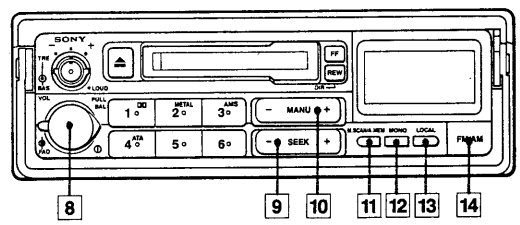
This section is extracted from XR-5240/ 5250 instruction manual.

SECTION 1 GENERAL

Location and Function of Controls





Refer to the pages in ● for details.

1 **LOUD (loudness) button/TRE (treble) control**

LOUD button	Press to reinforce bass and treble especially when listening at low level. To disengage the button, press again.
TRE control	Turn clockwise to increase and counterclockwise to decrease the treble.

2 **BAS (bass) control**
Turn clockwise to increase and counterclockwise to decrease the bass.

3 **▲ (eject) button**
Press to stop tape playback and eject the cassette.

4 **Cassette insertion door**

5 **FF/REW (fast winding) buttons/DIR (tape transport direction change) buttons** ⑨ ⑩
During playback, depress FF or REW for fast winding, or press both FF and REW simultaneously to listen to the other side of the cassette.

6 **Display window**

7 **FAD (fader) control** ⑪
Turn clockwise to decrease the volume of the rear speakers or counterclockwise to decrease the volume of the front speakers.

8 **Power on • off switch/VOL (volume) control/PULL BAL (balance) control**

Power on • off switch	Press to turn on and off the unit.
VOL control	Turn clockwise to increase and counterclockwise to decrease the volume.
PULL BAL control	While pulling the control knob, turn to adjust the balance of the left and right channel outputs.

9 **SEEK −/+ button** ⑫ ⑯
Press − side to search stations in lower frequencies and + side to search in higher frequencies.

10 **MANU (manual) −/+ button** ⑮ ⑯
Press to tune in the desired stations manually.

11 **M.SCAN (memory scan)/A.MEM (automatic memory) button** ⑰

Function	Operation
M.SCAN	Press for a moment to scan the preset stations automatically.
A.MEM	Press for more than two seconds to memorize the stations automatically.

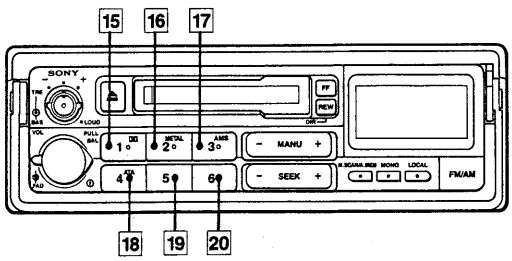
12 **MONO (monaural) button (XR-5250)** ⑬
Press to reduce noise during reception of a weak FM stereo program. To listen in stereo, press again.

DSPL (display) button (XR-5240) ⑱
Press to display the time digits (clock). Press again to go back to the normal mode.

13 **LOCAL (local seek) button (XR-5250)** ⑭
SENS (sensitivity) button (XR-5240) ⑬ ⑭

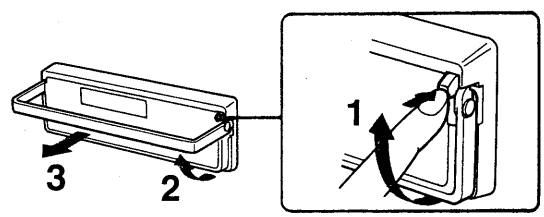
14 **FM/AM band select button** ⑫ ⑬ ⑰

Location and Function of Controls



	During tape playback	During radio operation
15	**DD (Dolby NR) button** ⑧	**Preset number buttons** ⑯ ⑰
16	**METAL button** ⑧	
17	**AMS (Automatic Music Sensor) button** ⑩	
18	**ATA (Automatic Tuner Activation) button** ⑪	
19	–	
20	–	

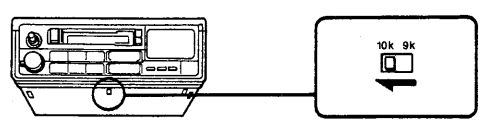
To Remove the Unit (XR-5250 only)



To prevent the unit from being stolen
When you leave your car, remove the unit from the bracket and take it away with you.
Be sure to turn off the power of the unit before removing the unit. Otherwise you may hear a noise.

To change the AM tuning interval (except for the model for European countries)

The tuning interval selector is set to 9 k at the factory. If you use the unit where the frequency allocation is based on another tuning interval, change the interval before making connections using the tuning interval selector on the bottom.



Change the position with a ball-point pen or similar objects.

Installation/Installation/Instalación/安装

Precautions

- Choose the mounting location carefully so that the unit will not interfere with the normal driving functions of the driver.
- Avoid installing the unit where it should be subjected to high temperatures, such as from direct sunlight or from hot air from the heater, or where it would be subjected to dust, dirt or excessive vibration.
- Use only the supplied mounting hardware for a safe and secure installation.

Précautions

- Choisir soigneusement l'emplacement de montage pour que l'appareil n'interfère pas avec les fonctions normales de conduite du véhicule.
- Eviter d'installer l'appareil là où il pourrait être exposé à une haute température telle que celle de la lumière directe du soleil ou provenant d'un appareil de chauffage ou là où il serait exposé à la poussière, à la saleté ou à une vibration excessive.
- Utiliser uniquement le matériel de montage fourni pour effectuer une installation sûre.

Precauciones

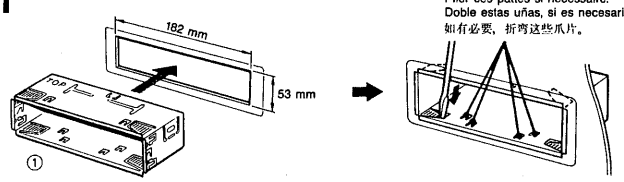
- Elija cuidadosamente el lugar de montaje de forma que la unidad no interfiera las funciones normales de conducción.
- Evite instalar la unidad donde pueda quedar sometida a altas temperaturas, como a la luz solar directa o al aire caliente de calefacción, o polvo, suciedad, o vibraciones excesivas.
- Para realizar una instalación segura y firme, emplee solamente la ferretería de montaje suministrada.

安装前须知事项

- 安装位置应选在不妨害驾驶者操作之处。
- 不可安装在易受直射阳光照射、暖气排出口等高温之处，或易蒙受灰尘，污秽或震动太大的地方。
- 安装时为保安全起见，请使用附属的安装用工具。

To Install the Unit in the Dashboard
Installation de l'appareil dans le tableau de bord
Para fijar la unidad en el salpicadero
要安装在汽车仪表板时

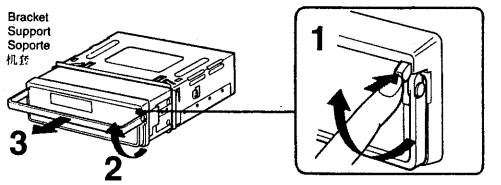
1 XR-5240



Bend these claws, if necessary.
Plier ces pattes si nécessaire.
Doble estas uñas, si es necesario.
如有必要，折弯这些爪片。

1 XR-5250

Bracket
Support
Soporte
机套



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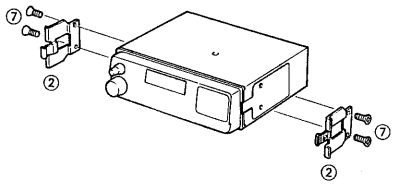

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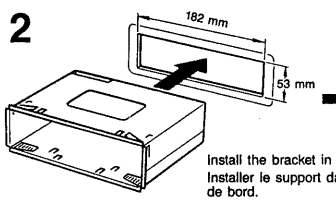

Bend these claws, if necessary.
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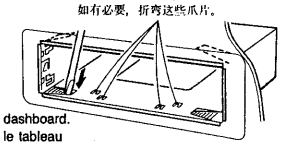
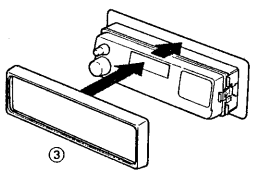
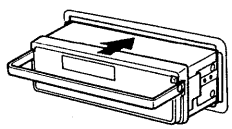


Install the bracket in the dashboard.
Installer le support dans le tableau de bord.
Instale el soporte en el salpicadero.
把防护套安装在仪表板上。

3



3



Secure the unit.
Fixer l'appareil
Asegure la unidad.
把两用机装进机套里。

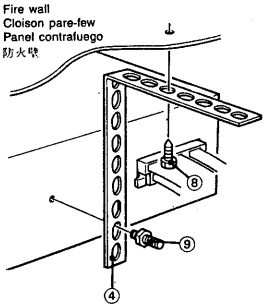
Push in the unit until it is locked firmly.
Pousser l'appareil jusqu'à verrouillage ferme.
Empuje la unidad hasta que se enganche firmemente.
向内推入直到牢固装入为止。

To Support the Unit
Pour supporter l'appareil
Para fijar la unidad
要固定于机板上时

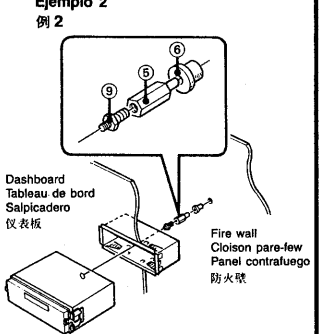
XR-5240

Example 1
Exemple 1
Ejemplo 1
例1

Fire wall
Cloison pare-few
Panel contrafuego
防火壁



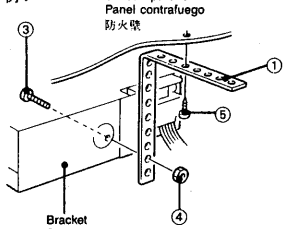
Example 2
Exemple 2
Ejemplo 2
例2



XR-5250

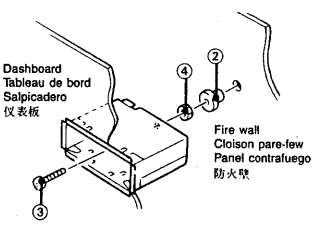
Example 1
Exemple 1
Ejemplo 1
例1

Fire wall
Cloison pare-few
Panel contrafuego
防火壁

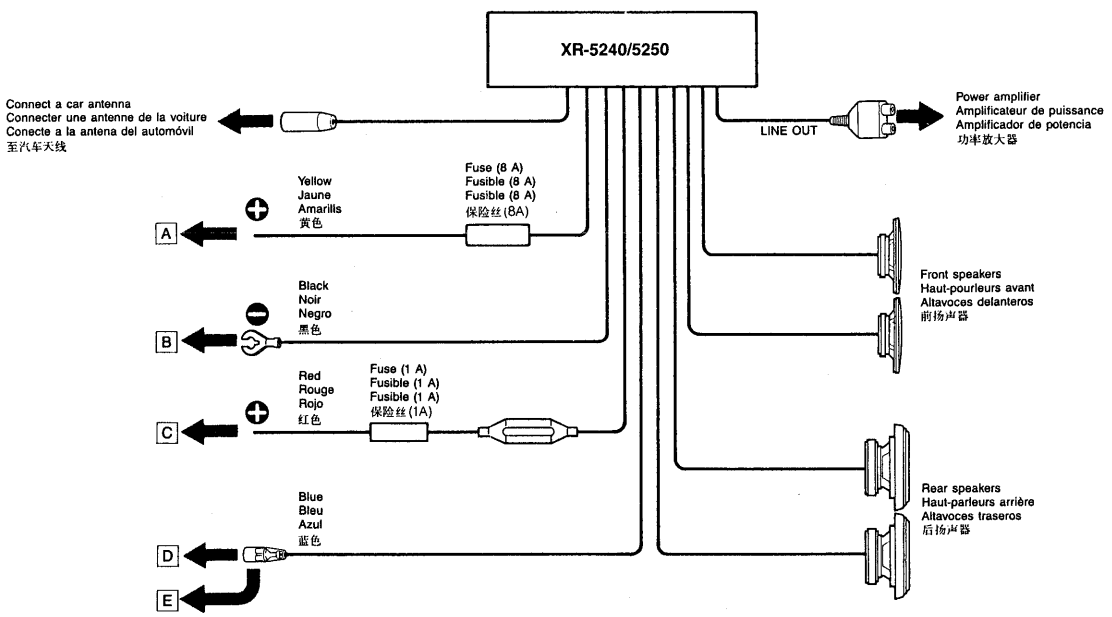


Bracket
Support
Soporte
机套

Example 2
Exemple 2
Ejemplo 2
例2



Connection Diagram
Schéma des connexions
Diagrama de conexiones
连接方块图



A : To the +12 V power terminal which is energized at all times

B : To a metal point of the car

C : To the +12 V power terminal which is energized with the ignition key in the accessory position

D : To the power antenna relay control box

E : To the power amplifier

Cord color

Red: Power input lead
Yellow: Power input lead
Blue: Power antenna relay control/Power amplifier control lead
Black: Ground wire

A : A la borne d'alimentation de +12 volts qui est énegétisée tout le temps

B : A un point métallique de la voiture

C : A la borne d'alimentation de +12 volts qui est énergétisée lorsque la clé de contact est sur la position accessoire

D : Au boîtier de contrôle de relais d'antenne moteur

E : A la amplificateur de puissance

Couleur des cordons

Rouge: Fil d'entrée d'alimentation
Jaune: Fil d'entrée d'alimentation
Bleu: Fil de contrôle de relais d'antenne/Fil de contrôle de l'amplificateur de puissance
Noir: Fil de masse

A : al terminal de alimentación de +12 V que está siempre excitado

B : a un punto metálico del automóvil

C : al terminal de alimentación de +12 V que se excita al poner la llave de encendido en la posición para accesorios

D : a la caja de control por relé de la antena motorizada

E : a la amplificador de potencia

Color de los conductores

Rojo: conductor de entrada de alimentación
Amarillo: conductor de entrada de alimentación
Azul: conductor de control por relé de la antena motorizada/conductor de control por relé de la amplificador de potencia
Negro: conductor de puesta a carrocería

A：至 +12 伏特电源端子，该端子随时都处于点火状态。

B：至汽车金属端。

C：至 +12 伏特电源端子，该端子当点火引擎插口被转在 "accessory" 位置时将处于点火状态。

D：至功率天线延迟控制箱。

E：至功率放大器。

电线颜色

红色：功率输入导线
黄色：功率输入导线
蓝色：功率天线延迟控制导线/功率放大器控制导线
黑色：接地线

Connections/Connexions/Conexiones/连接

Caution

- This unit is designed for negative ground 12 V DC operation only.
- Before making connections, disconnect the ground terminal of the car battery to avoid short circuits.
- Connect the **red** power input lead only after all other leads are connected. And be sure to connect it to the positive 12 V power terminal. It will be energized when the ignition key is set to the accessory position.
- **Run all ground wires to a common ground point.**

Attention

- Cet appareil est conçu uniquement pour un fonctionnement sur courant continu de 12 volts avec masse négative.
- Avant d'effectuer les connexions, déconnecter la borne de masse de la batterie de voiture pour éviter un court-circuit.
- Connecter le fil d'alimentation **rouge** uniquement une fois que tous les autres fils ont été connectés. S'assurer de le connecter à la borne positive de 12 volts. L'alimentation est fournie lorsque la clé de contact est mise sur la position accessoire.
- **Faire cheminer tous les fils de masse à une masse commune.**

Precauciones

- Esta unidad ha sido diseñada para funcionar solamente con 12 V CC y negativo a masa.
- Antes de realizar las conexiones, desconecte el terminal de masa de la batería del automóvil a fin de evitar cortocircuitos.
- Conecte el conductor de entrada de alimentación **rojo** después de haber conectado los demás. No se olvide de conectarlo al terminal de alimentación de 12 v positivo. Este conductor deberá excitarse al poner la llave de encendido en la posición para accesorios.
- **Conecte todos los terminales de masa a un punto común del automóvil.**

注意

- 本机只可使用负极接地12伏特直流电。
- 连接以前，请先拔下汽车电池接地端以防短路。
- 所有电线连接完毕以后才可连接**红色**电源线。电源线必须连接到正极12伏特直流电端子才行。又，当引擎点火插口被转在"accessory"位置时，汽车将处于点火状态，敬请注意。
- **所有的接地线请都接至一共同接地点。**

Notes on AM tuning interval (except for the model for European countries)

The AM tuning interval is factory-set to 9 kHz. If the frequency allocation system of your country is based on 10 kHz interval, set the selector on the bottom to 10 K before making connections.

Remarque sur l'intervalle d'accord AM (sauf pour le modèle destiné à l'Europe)

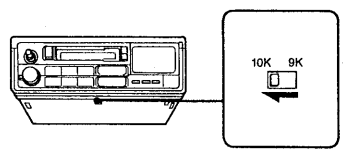
L'intervalle d'accord AM est préréglé en usine sur 9 kHz. Si le système d'allocution de fréquence de votre pays est basé sur 10 kHz, régler le sélecteur sur le fond sur 10 kHz avant d'effectuer les connexions.

Nota sobre el intervalo de sintonía de AM (excepto el modelo para Europa)

El intervalo de AM ha sido preajustado en fábrica a 9 kHz. Si el sistema de asignación de frequencias de su país se basa en el intervalo de 10 kHz, siga estos pasos antes de emplear la unidad.

AM调谐区间（不包括欧洲型机器）

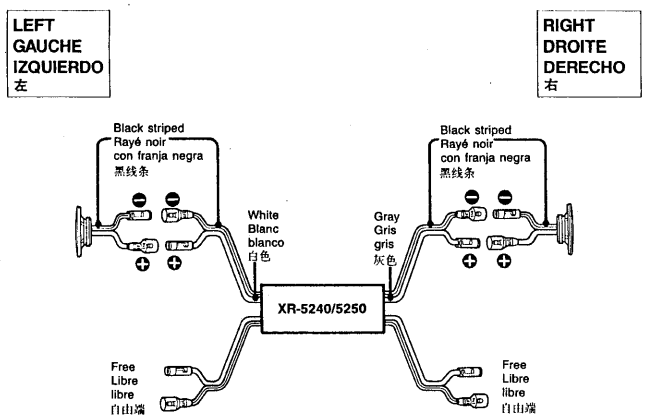
AM 调谐区间已于厂内时被设定于9kHz 之处。但若贵国的频率配置为10kHz 区间，请在连接电线以前，先调整机底的选择器。



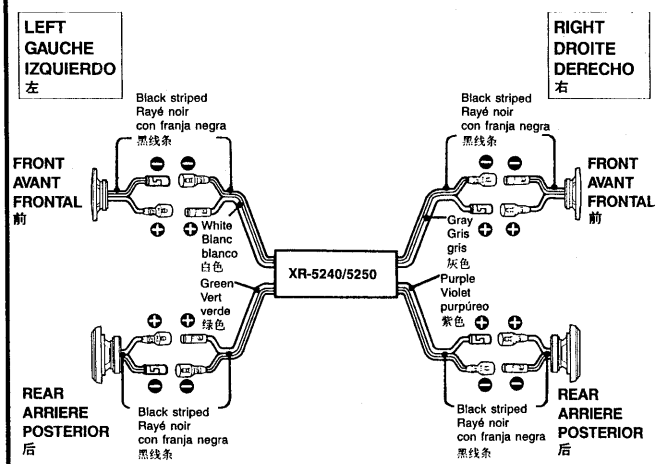
Change the position with a ball-point pen or similar objects.
Changer la position avec un stylo à bille ou autre objet similaire.
Cambie la posición con un bolígrafo u otro objeto similar.
以圆珠笔等物调整选择器位置。

Speaker Connection
Connexion des haut-parleurs
Conexión de los altavoces
扬声器之连接

2-speaker connection
Connexion de deux haut-parleurs
Conexión de un sistema de 2 altavoves
连接 2 个扬声器时



4-speaker connection
Connexion de quatre haut-parleurs
Conexión de un sistema de 4 altavoces
连接 4 个扬声器时



Notes on speaker connection

- Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities. Otherwise, the speakers may be damaged.
- Do not connect the terminals of the speaker system to the car chassis, and do not connect the terminals of the right speaker with those of the left speaker.

Remarques sur la connexion des haut-parleurs

- Utiliser des haut-parleurs d'une impédance de 4 à 8 ohms et ayant une puissance nominale adéquate. Dans le cas contraire, les haut-parleurs peuvent être endommagés.
- Ne pas connecter les bornes du système de haut-parleur au châssis de la voiture et ne pas non plus connecter les bornes des haut-parleurs de droite avec celles des haut-parleurs de gauche.

Notas sobre la conexión de altavoces

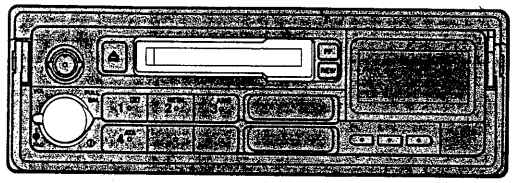
- Emplee un sistema de altavoces de 4 a 8 ohmios de impedancia y con la potencia admisible adecuada. De lo contrario, los altavoces podrían dañarse.
- No conecte los terminales de los altavoces al chasis del automóvil ni conecte los terminales del altavoz derecho a los del izquierdo.

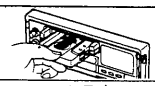
扬声器连接时之注意事项

- 请使用 4 至 8 欧姆阻抗，且操作电容适宜的扬声器，否则扬声器容易受损毁。
- 不可把扬声器端子连接到汽车机壳，也不可把右扬声器端子和左扬声器端子相连接。

Cassette deck operation

Tape Playback



1		**Press to turn on the unit.**
2		**Insert a cassette.** Playback starts automatically.
3		**Adjust the volume.**

Other Operations

To listen to the other side of the cassette	Press FF / REW (simultaneously).
To wind the tape rapidly	To advance the tape — Depress FF. To rewind the tape — Depress REW. To resume playback, press FF or REW lightly so as not to depress it.
To stop playback and listen to the radio	Press ⏏. The unit enters the radio mode.
To stop playback and turn off the unit	Press ⏏ and then .

Before turning off the unit:
Be sure to eject the tape to avoid tape damage.

To adjust the unit to each tape type

Tape type	
CrO2 (TYPE II) Metal (TYPE IV)	Press the METAL button.
Normal (TYPE I)	Press the METAL button again.

Listening to Dolby NR-processed tapes
Press the DOLBY NR (Dolby NR) button to activate the B-type Dolby NR system.
Select the same Dolby NR system used for the recorded cassette. The Dolby NR (Noise Reduction) system reduces tape hiss noise in low-level, high-frequency signals.

Side of the cassette being played back or fast-wound

Indicator	
▶	The side facing upward
◀	The side facing downward

Tape playback

To Locate the Beginning of a Selection — Automatic Music Sensor (AMS)

1 **Press** AMS 3 .

2 **Depress** FF or REW **, according to the table below.**

Next selection	Depress FF.
Current selection	Depress REW.

The desired selection may not be located if ...
— there is a noise in the space between selections.
— the space is less than 4 seconds long.
— the FF or REW button is pressed immediately before or after the desired selection, or within the blank space.

Playback may begin in the middle of the selection when the AMS is activated, as the followings are treated as blanks:
— a long pause in the selection.
— a passage of low frequencies or very low volume.
— gradual increase or decrease of volume, as in some classical music.

To Turn on the Radio Automatically While Fast-winding the Tape (ATA function)

Press ATA 4 .

The tuner turns on automatically when you press the FF or REW button during tape playback. When you resume the tape playback, the tuner turns off automatically.

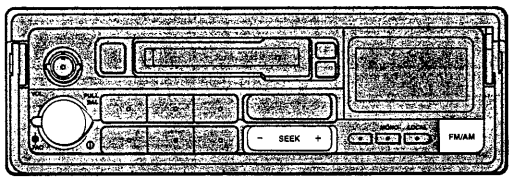
Note
None of the preset buttons will function while the ATA function is in operation. However, other tuner operation buttons will function normally.

To control the balance of the front and rear speakers in a 4 speaker system
Use the FAD control.
Turn clockwise to decrease the volume of the rear speakers.
Turn counterclockwise to decrease the volume of the front speakers.

To control the balance of the right and left speakers
Use the PULL BAL control.
Pull out the control and turn clockwise to decrease the volume of the left speaker(s), and turn counterclockwise to decrease the volume of the right speaker(s).

Radio reception

Automatic Tuning



1

Press to turn on the unit.

2 FM/AM

Press to select the desired band, FM I, FM II, FM III, or AM.

3 − SEEK +

Press to start scanning.

−: For lower frequency stations

+: For higher frequency stations

The scanning automatically stops when a station is tuned in.

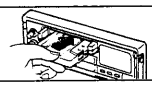
Repeat this step until the desired station is tuned in.

4

Adjust the volume.

Other Operations

To stop the radio and start tape playback



To stop the radio and turn off the unit

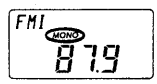
Press

When the FM stereo program is too weak and noisy

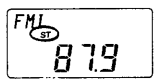
Press MONO (XR-5250). The noise will be reduced. The sound will be monaural instead.

or

Press SENS* (XR-5240) twice.



When an FM stereo program of sufficient signal strength is tuned in



The program is automatically received in stereo.

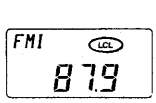
*Each press on the button changes the mode cyclically as LCL (local) ➡ MONO ➡ normal ... . (XR-5240 only)

When there are too many stations and the scanning stops too frequently during automatic tuning

Press LOCAL (XR-5250). Only the stations with relatively strong signals can be tuned in.

or

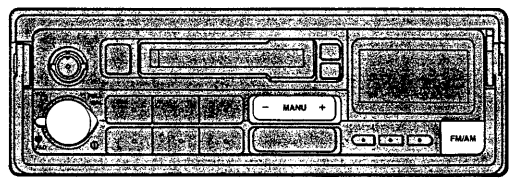
Press SENS (XR-5240) once.



Radio reception

Manual Tuning

Use this method when you know the frequency of the desired station, or when the desired station is too weak to be tuned in by the automatic tuning.



1

Press to turn on the unit.

2 FM/AM

Press to select the desired band, FM I, FM II, FM III or AM.

3 − MANU +

Press to select the desired station.

−: For lower frequency stations

+: For higher frequency stations

To change the frequency rapidly, keep the button pressed.

4

Adjust the volume.

Warning

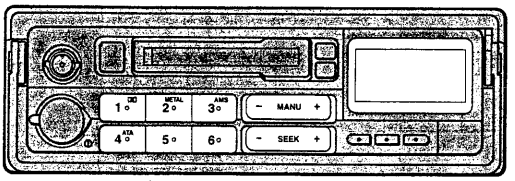
While driving, keep your eyes on the road and use the automatic tuning or memory preset tuning!

Radio reception

Memory Preset Tuning

To Memorize the Stations

The unit can memorize up to 6 stations on the AM band and 18 stations on the FM band (6 stations each on FM I, FM II, and FM III).

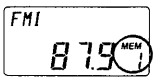


1 – SEEK + / or / – MANU +

Tune in a desired station using the automatic or manual tuning.

2 1 — 6

Keep the desired preset button pressed while the sound is being muted.



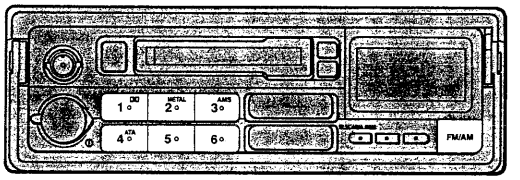
The station is memorized.

Repeat these steps for each preset button.

Important

Every preset button has only one memory for a band. The previously memorized station will be erased when you enter a new station of the same band on the same preset button.

To Receive the Preset Station



1 FM/AM — **Press to select the desired band.**

2 1 — 6 — **Press the desired preset button lightly.**

To memorize the stations automatically

Press the M.SCAN/A.MEM button for more than two seconds. The unit scans for the stations, and memorize them on the preset number in order of frequency and of the preset number. (Scanning starts from the frequency indicated on the display window.)

Press the FM/AM button again to select FM I, FM II, FM III, or AM and repeat the procedure again.

If a station is received when you start to memorize

The station will be memorized on the preset number 1.

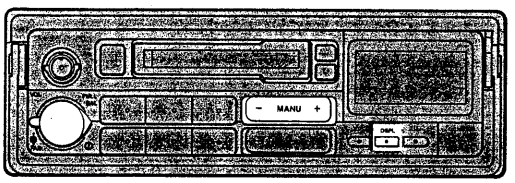
When any other preset number is indicated on the display window

The stations will be memorized on the next preset number to the preset number 6.

To survey what is being broadcasted on the preset stations

Press the M.SCAN/A.MEM button. Each memorized station will be scanned for a few seconds. To stop scanning, press the M.SCAN/A.MEM button again at the desired program.

Setting the Clock (XR-5240 only)



1 — **Press to turn on the unit.**

2 DSPL — **Press once to display the time digits.**

3 DSPL / – MANU + — **Press to set the time digits while pressing the DSPL button.**

–: To advance the **hour** digits

+: To advance the **minute** digits

To advance the digits rapidly, keep the button pressed.

When to set minute digits

- Minute and hour digits do not go backward.
- "00" comes after "59". The hour digits do not change then.

Maintenance

Fuse Replacement

If the fuse blows, check the power connection and replace the fuse. If the fuse blows again after replacement, there may be an internal malfunction. In this case, consult your nearest Sony dealer.

Warning

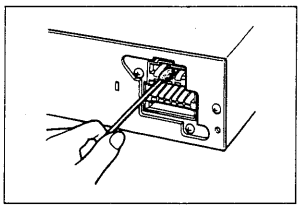
Use the specified amperage fuse for each lead. Use of a higher amperage fuse may cause serious damage.

Cleaning the Head and the Tape Path

Prolonged use may contaminate the tape head and the tape path. Contamination causes sound drop-outs in playback. Clean the tape head and the tape path every two weeks to enjoy optimum hi-fi stereo sound. Use a commercially available cleaning cassette.

Cleaning the Connector (XR-5250 only)

To keep the best possible sound quality, clean the metallic part of the connector at the rear of the unit periodically using a commercially available head cleaning fluid or rubbing alcohol and a cotton swab.



SECTION 2
ADJUSTMENTS

2-1. MECHANICAL ADJUSTMENT

PRECAUTION

1. Wipe the following components with an absorbent cotton cloth moistened with alcohol before adjustment:
   PB head — Pinch roller
   Idler — Rubber belt
   Capstan
2. Demagnetize the PB head using a head demagnetizer.
3. Be careful not to use a magnetized screwdriver.
4. After the adjustment is completed, lock the adjustment parts using screws.
5. Unless otherwise specified, make adjustments at the specified voltage (14.4 V).

Torque Measurement

Measure the torque at a supply voltage of 14.4 V DC.

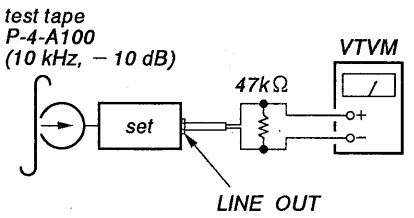
	Torque Meter	Meter reading
FWD	CQ-102C	25 to 55 g•cm (0.35 to 0.77 oz•inch)
FF, REV	CQ-201B	55 to 150 g•cm (0.77 to 2.1 oz•inch)
Back tension	CQ-102C	1.5 to 4 g•cm or less (0.02 to 0.05 oz•inch or less)

2-2. ELECTRICAL ADJUSTMENT DECK SECTION

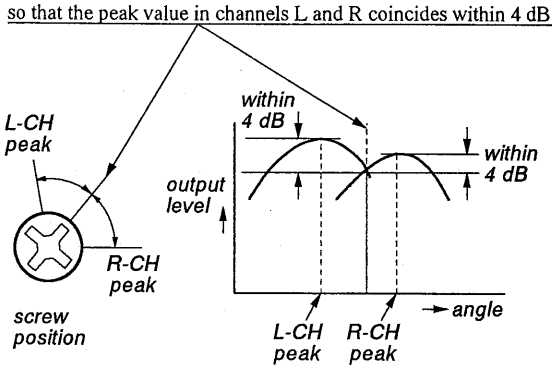
PB Head Vertical Adjustment

Procedure:

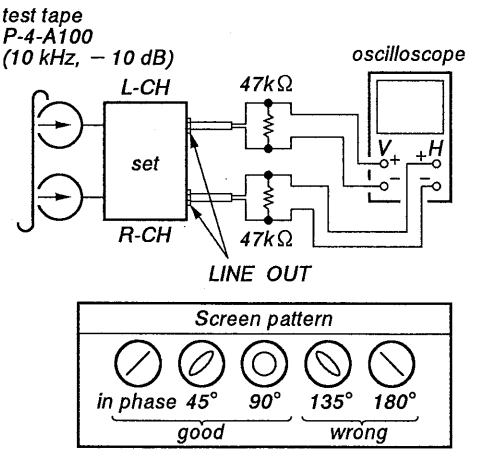
1. Put the set into the FWD PB mode.



2. Turn the screw and check the output peak value. Adjust the screw so that the peak value in channels L and R coincides within 4 dB μ.



3. Check the phase in the PB mode.



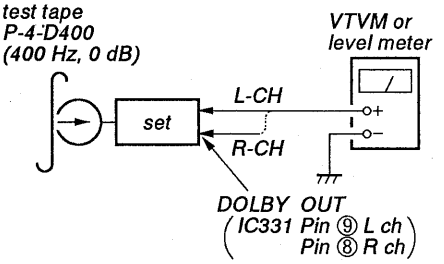
4. Repeat the above adjustment for the REV PB mode.
5. Check that output level difference between FWD PB mode and REV PB mode is within 4 dB μ.

Adjustment Location: Mechanism Deck

DOLBY NR Level Adjustment

Setting:

DOLBY NR switch: OFF
METAL switch: OFF



Procedure:

1. Put the set into the FWD PB mode.
2. Adjust RV101 (L-CH) so that VTVM reading is – 10 dB ± 1 dB.
3. Put the set into the REV PB mode.
4. Adjust RV201 (R-CH) so that VTVM reading is – 10 dB ± 1 dB.

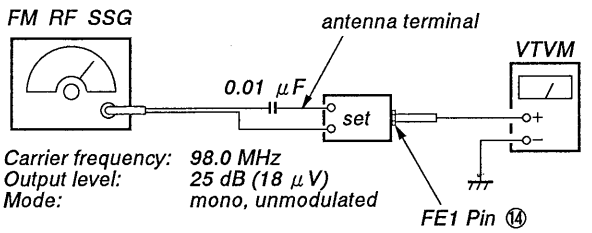
Adjustment Location: Main board

TUNER SECTION

Cautions during repair
When the front end is defective, replace it by a new one because its internal block is difficult to repair.

FM Stop Level Adjustment

Setting:
Band switch : FM
Frequency: 98.0 MHz



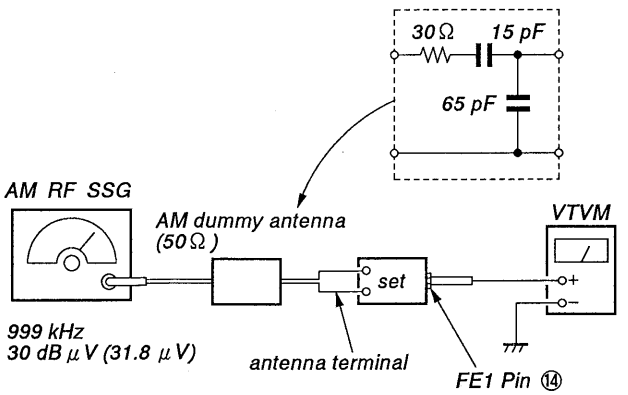
Procedure:
1. Tune in 98 MHz.
2. Adjust RV A so that the VTVM reading changes from low to high (5.5 V reference voltage).
3. When the FM RF SSG's output level is 25 ±3 dB μV.

Adjustment Location: FE1 on Main board

AM Stop Level Adjustment

Note: This adjustment should be made after FM auto scan stop level adjustment is completed.

Setting:
Band switch : AM
Frequency: 999 kHz

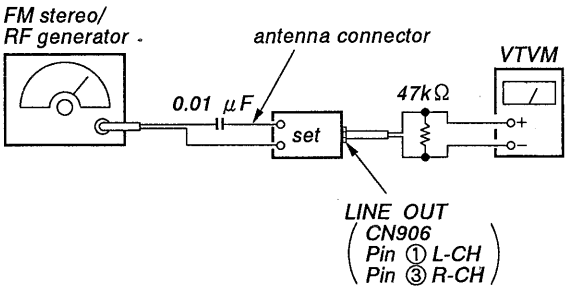


Procedure:
1. Tune in 999 kHz.
2. Connect Pin ⑯ of FE1 to 5 V line with 4.7 kΩ resistor.
3. Adjust RV B so that the VTVM reading changes from low to high (5.5 V reference voltage).
4. When the AM RF SSG's output level is 30 ±3 dB μV check that the auto scan stopped.

Adjustment Location: FE1 on Main board

FM Stereo Separation Adjustment

Setting:
Band switch : FM
Frequency: 98.0 MHz



Carrier frequency: 98.0 MHz
Output level: 70 dB μV (3.15 mV)
Modulation: main; 1 kHz, 33.75 kHz deviation
sub; 1 kHz, 33.75 kHz deviation
19 kHz pilot; 7.5 kHz deviation

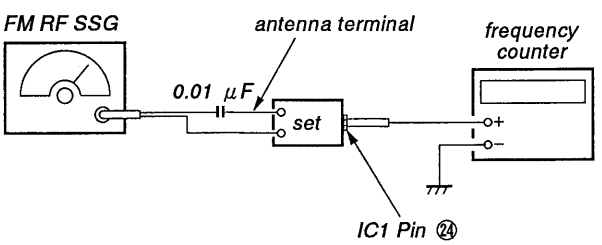
Procedure:
1. Adjust RV1 for a best stereo separation at a LINE OUT level of approximately +10 dB.

FM stereo signal generator output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV1 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV1 for minimum reading.

L-CH Stereo separation: Ⓐ − Ⓑ
R-CH Stereo separation: Ⓒ − Ⓓ
The separations of both channels should be equal.

FM VCO Adjustment

Setting:
Band switch : FM stereo

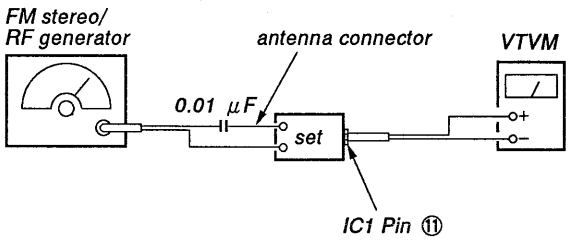


Procedure:
1. Connect Pin ㉓ of IC 1 to ground with 180 kΩ resistor.
2. Adjust RV3 to obtain 19 kHz ±0.3 kHz reading on frequency counter.

FM Stereo Noise Control/High Cut Control Adjustment

Setting:

Band switch : FM
Frequency: 98.0 MHz



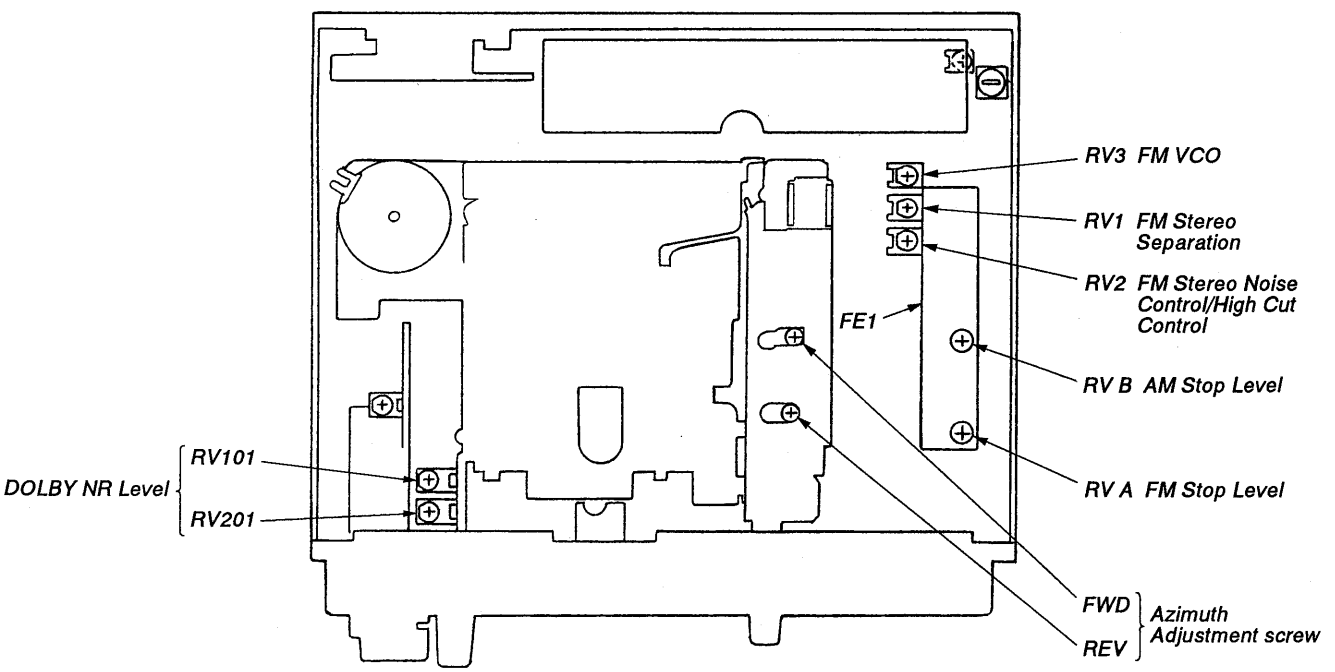
Carrier frequency: *98.0 MHz*
Output level: *40 dB μV (100 mV)*
Modulation: *main; 1 kHz, 33.75 kHz deviation*
sub; 1 kHz, 33.75 kHz deviation
19 kHz pilot; 7.5 kHz deviation

Procedure:

1. Tune in 98.0 MHz.
2. Turn off R ch output of FM stereo/RF generator.
3. Adjust RV2 so that the voltage on Pin ⑪ of IC1 becomes 0.5 ±0.05 V dc.

Adjustment Location: Main board

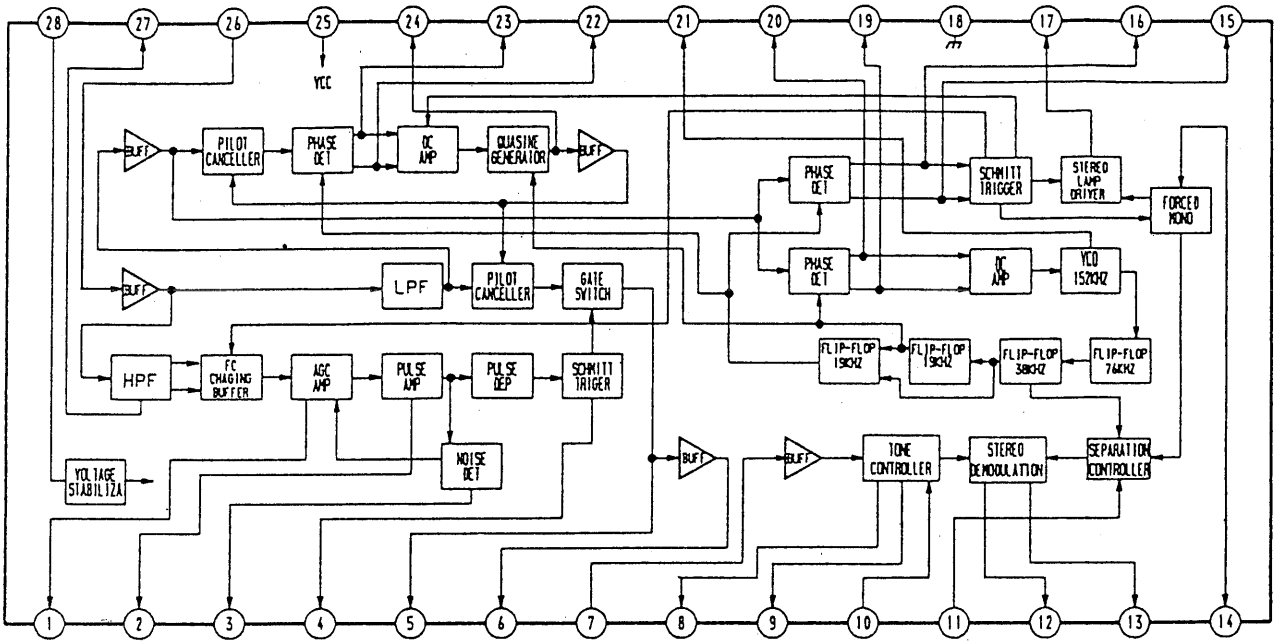
[Adjustment Location Diagram]



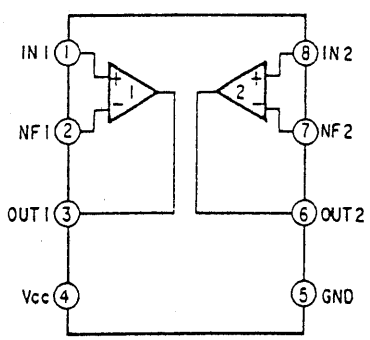
SECTION 3
DIAGRAMS

3-1. IC BLOCK DIAGRAMS

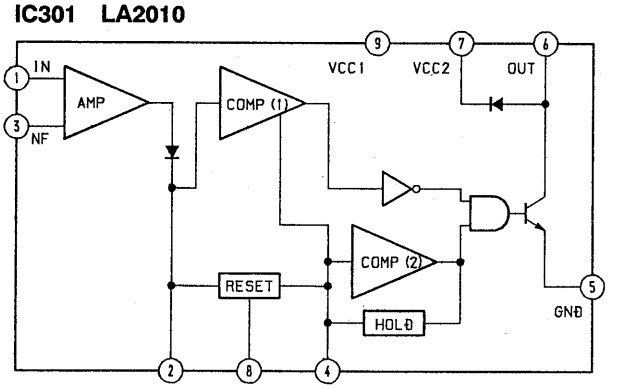
IC1 AN7463S



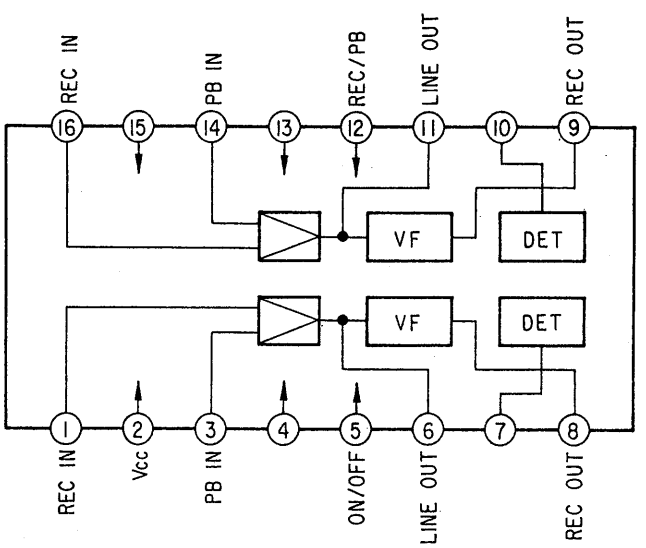
IC101 μPC1228HA



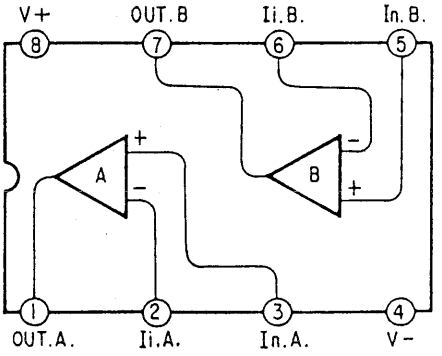
IC301 LA2010



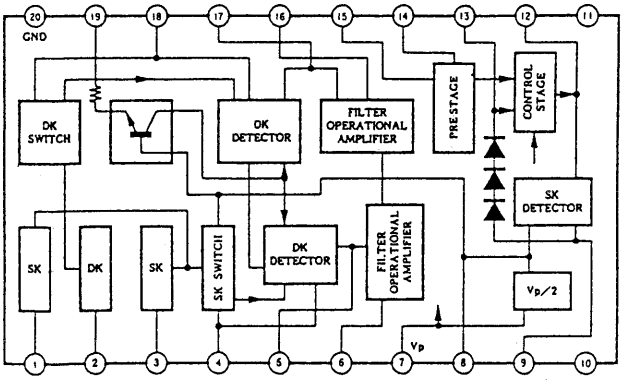
IC331 CXA1101M



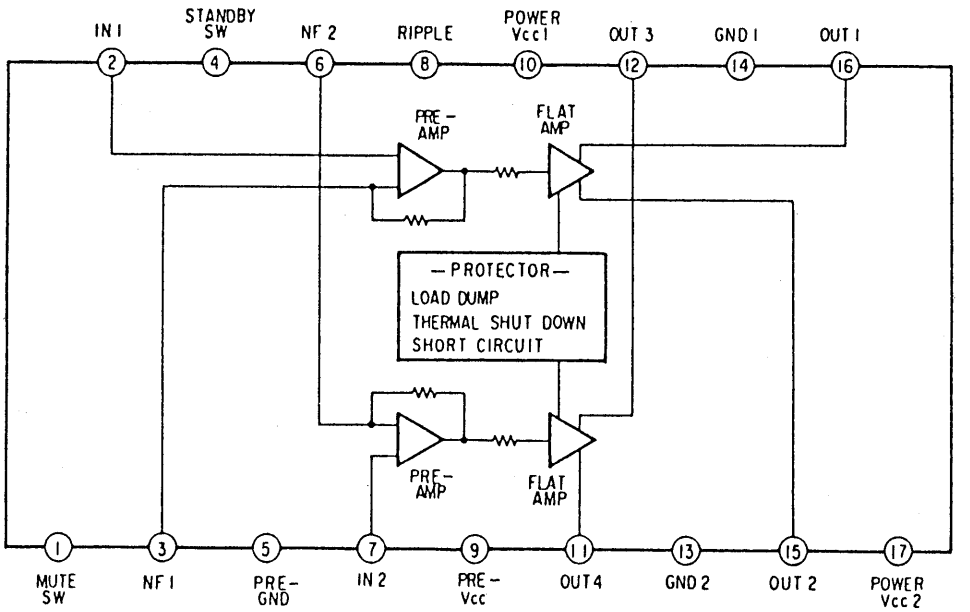
IC361 μPC4570



IC501 TDA1579



IC601 TA8221H

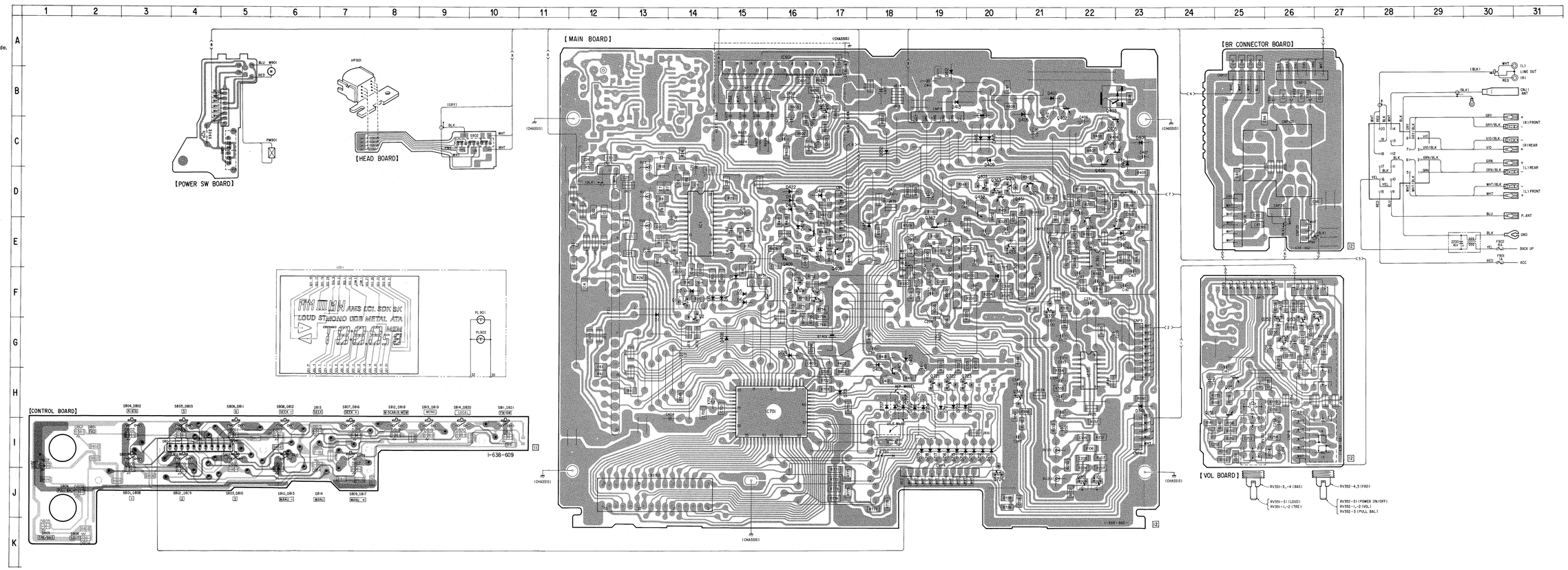


Note:

- ○——: parts extracted from the component side.
- ●: Through hole.
- ▒▒: Pattern on the side which is seen.
- ▒▒: Pattern of the rear side.

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D1	F-13	DB10	J-5
D2	F-15	DB11	J-5
D3	F-14	DB12	J-6
D4	F-15	DB13	J-6
D5	F-15	DB14	J-6
D6	F-15	DB15	J-6
D7	F-14	DB16	J-7
D301	F-20	DB17	J-7
D341	H-23	DB18	J-8
D361	E-23	DB19	J-9
D401	B-21	DB20	J-9
D402	G-18	DB21	J-10
D403	G-18		
D405	B-21	IC1	E-14
D406	C-23	IC1101	F-19
D407	C-23	IC301	E-21
D408	G-15	IC331	H-22
D409	C-20	IC361	E-22
D410	E-17	IC501	B-13
D412	B-19	IC601	A-16
D413	B-19	IC701	H-16
D415	C-20		
D416	C-20	Q1	F-14
D421	D-16	Q2	F-14
D422	D-16	Q101	J-22
D423	D-16	Q151	H-25
D424	E-16	Q152	G-27
D431	E-18	Q153	G-26
D451	D-17	Q161	E-23
D501	C-13	Q201	J-22
D502	C-13	Q251	H-25
D503	C-12	Q252	G-26
D571	G-20	Q253	G-26
D572	G-20	Q261	E-22
D573	H-23	Q301	D-21
D574	G-20	Q302	D-20
D652	C-18	Q303	D-20
D701	H-17	Q331	F-21
D702	H-18	Q345	H-21
D704	H-19	Q362	E-19
D707	H-18	Q363	D-20
D708	H-18	Q401	G-18
D711	I-20	Q402	B-21
D712	I-20	Q403	B-22
D713	I-20	Q404	C-22
D714	I-19	Q405	C-22
D715	I-19	Q406	C-22
D716	I-19	Q408	E-17
D717	I-19	Q409	E-16
D718	I-19	Q421	E-16
D719	I-19	Q451	D-20
D721	H-19	Q452	D-20
D722	H-19	Q453	E-20
D723	H-20	Q551	E-18
D724	H-20	Q552	D-16
D726	H-20	Q570	G-25
D728	G-16	Q571	F-25
D755	F-24	Q651	B-17
D801	J-2	Q721	H-19
D802	J-3	Q722	H-19
D803	J-4	Q723	H-20
D804	H-4	Q724	H-20
D805	I-1	Q725	H-20
D806	I-2	Q726	J-20
D807	J-1	Q751	F-17
D808	J-3	Q752	F-16
D809	J-4		



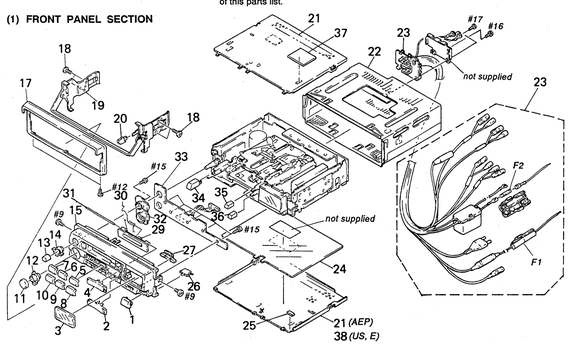
Note:
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- B+ : B+ Line.
- ▭ : adjustment for repair.
- Power voltage is dc 14.4 V and fed with regulated dc power supply from battery terminal
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : PB/FM/AM
  ( ) : FM/AM
  < > : AM
- Voltages are taken with a VOM (10 MΩ/V).
  Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM
  ⇨ : PB

SECTION 4
EXPLODED VIEWS

NOTE:

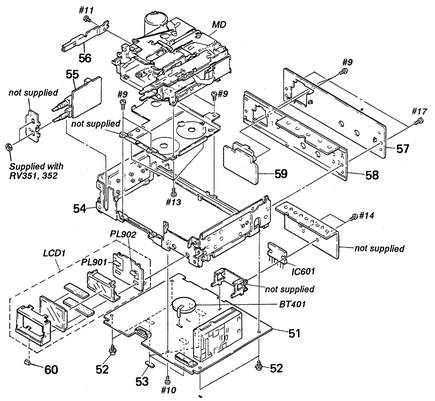
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ Parts Color ↑ Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

(1) FRONT PANEL SECTION



Ref.No.	Part No.	Description	Remark
1	3-365-853-01	BUTTON (RD:N1W) (FM/AM)	
2	3-365-851-01	BUTTON (W:S2W) (SEEK)	
3	3-365-830-01	WINDOW (LCD)	
4	3-365-850-01	BUTTON (W:S1W) (MANU)	
5	3-365-849-01	BUTTON (W:N3P) (3/AMS)	
6	3-365-848-01	BUTTON (W:N2P) (2/METAL)	
7	3-365-847-01	BUTTON (W:N1P) (1/DOLBY)	
8	3-365-849-11	BUTTON (W:N3P) (6)	
9	3-365-848-11	BUTTON (W:N2P) (5)	
10	3-365-847-11	BUTTON (W:N1P) (4/ATA)	
11	X-3362-740-1	KNOB (VOL) ASSY	
12	3-366-825-01	KNOB (FAD)	
13	X-3362-741-1	KNOB (TRE) ASSY	
14	3-366-826-01	KNOB (BASS)	
15	X-3362-742-1	PANEL SUB ASSY, FRONT	
17	3-367-061-01	FRAME, ORNAMENTAL	
18	3-344-561-01	SCREW (M4X5)	
19	X-3362-761-1	HANDLE ASSY	
20	3-367-065-01	BUTTON (HANDLE)	
21	* 3-353-402-01	COVER	
22	* X-3362-727-1	BRACKET ASSY	
23	1-590-580-11	CORD (WITH CONNECTOR) (US)	
23	1-590-581-11	CORD (WITH CONNECTOR) (AEP, E)	
24	* 3-344-560-11	INSULATOR (3) (AEP)	
24	* 3-344-560-61	INSULATOR (3) (US, E)	
25	9-911-841-XX	CUSHION, CASSETTE LID	
26	* 3-368-473-01	PLATE (F), SHIELD	
27	3-366-852-01	BUTTON (M, S, S)	
29	X-3362-738-1	LID ASSY, CASSETTE (E)	
29	X-3362-222-1	LID ASSY, CASSETTE (US, AEP)	
30	3-368-754-01	SPRING, TORSION	
31	3-350-709-01	SHAFT, CASSETTE DOOR	
32	* 3-366-829-01	PLATE (VOL), LIGHT GUIDE	
33	* A-3273-535-A	CONTROL BOARD, COMPLETE	
34	3-366-835-01	BUTTON (EJECT)	
35	3-366-836-01	BUTTON (FF)	
36	3-366-837-01	BUTTON (REW)	
37	* 3-366-854-01	LABEL, MODEL NUMBER (US, E)	
37	* 3-368-951-01	LABEL, MODEL NUMBER (AEP)	
38	* 3-353-402-71	COVER (US, E)	
F1	1-532-452-XX	FUSE, GLASS TUBE (1A)	
F2	1-576-075-11	FUSE, GLASS TUBE (8A)	

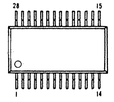
(2) CHASSIS SECTION



Ref.No.	Part No.	Description	Remark
51	* A-3222-282-A	MAIN BOARD, COMPLETE (US, E)	
51	* A-3222-283-A	MAIN BOARD, COMPLETE (AEP)	
52	3-344-501-11	SCREW (+ PTT 3X8), GROUND POINT	
53	9-911-841-XX	CUSHION, CASSETTE LID	
54	* X-3362-728-1	CHASSIS ASSY	
55	* A-3273-533-A	VOL BOARD, COMPLETE	
56	* 3-366-857-01	LEVER (EJECT)	
57	* 3-366-849-01	PANEL (REAR)	
58	* X-3362-729-1	CHASSIS (REAR A) ASSY	
59	* 1-638-616-11	BR CONNECTOR BOARD	
60	9-911-815-01	CUSHION	
LCD1	1-809-289-11	DISPLAY PANEL, LIQUID CRYSTAL	
BT401	1-528-225-31	BATTERY, LITHIUM	
PL901	1-518-682-11	LAMP, PILOT	
PL902	1-518-682-11	LAMP, PILOT	

• Semiconductor Lead Layouts

AN7463S



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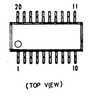
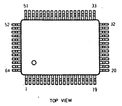
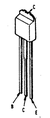


μ PC1723GF-558-3BE



2SA933S-OR

2SD1802-S

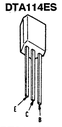


AY1101W

CXA1101M

μ PC1228HA

DTA114ES



2SA1428-Y

DSA3A4

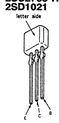
μ PC4570-G2

2SD1055

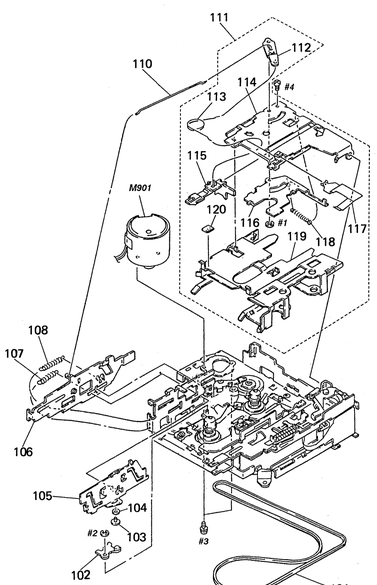
MTZN-10B
RD5.1ES-B2
RD5.6ES-B2
RD8.3ES-B2
RD9.1ES-B2
WG713A
ISR-139-100

TA8221H

DTC124TS
2SA1150
2SC2785-HFE
2SD1021

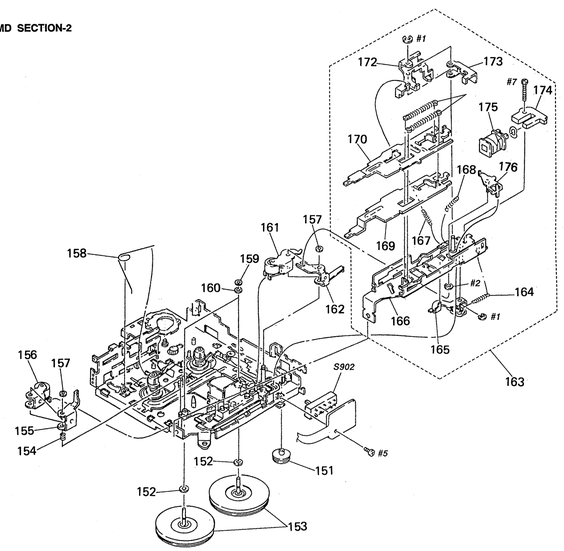


(3) MD SECTION-1



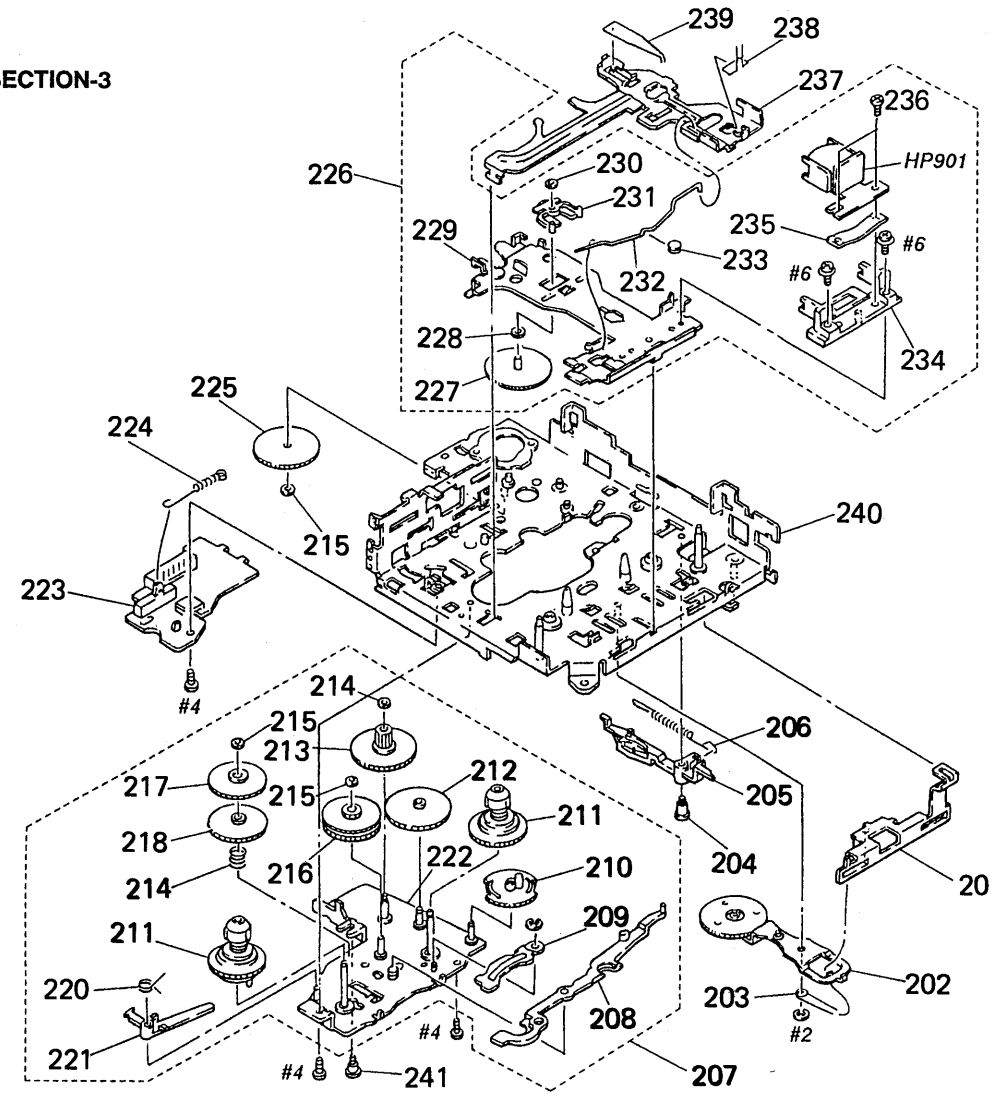
Ref.No.	Part No.	Description	Remark
101	3-367-284-01	BELT, MAIN	
102	3-367-313-01	ARM, H.P PUSH	
103	3-367-264-01	ROLLER (A), H.P	
104	3-367-265-01	ROLLER (B), H.P	
105	* 3-367-311-01	PLATE (M), PUSH, C.H	
106	* 3-367-269-01	LEVER (M), PUSH	
107	3-367-267-01	SPRING, C.H	
108	3-367-268-01	SPRING, PUSH LEVER	
110	3-367-260-01	SPRING, P.E	
111	X-3362-789-1	CASE ASSY, CASSETTE	
112	* 3-367-252-01	RIVETING ASSY, P.E PLATE	
113	3-367-255-01	SPRING (C), REVERSE	
114	* 3-367-251-01	LIFTER, CASE	
115	3-367-258-01	SLIDER (C), PACK	
116	* 3-367-257-01	PLATE (B), C.D	
117	* 3-367-259-01	SPRING, PACK RETAINER	
118	3-367-253-01	SPRING, C.D	
119	* 3-367-256-01	CASE (M), CASSETTE	
120	3-367-254-01	RUBBER, CUSHION	
M901	3-367-276-01	MOTOR ASSY	

(4) MD SECTION-2



Ref.No.	Part No.	Description	Remark
151	3-367-287-01	PULLEY, MIDWAY	
152	3-701-437-01	WASHER	
153	3-367-283-01	RIVETING ASSY, F.L CAPSTAN	
154	3-367-285-01	SPRING, P.P	
155	* 3-367-296-01	ARM, H.P RETURN	
156	3-367-232-01	ARM (R) ASSY, PINCH ROLLER	
157	3-576-387-00	POLY-SLIDER (DIA.1.6)	
158	3-367-314-01	SPRING (M), HEAD PANEL	
159	3-592-680-00	WASHER (C), POLYETHYLENE	
160	3-315-495-41	WASHER	
161	3-367-231-01	ARM (F) ASSY, PINCH ROLLER	
162	* 3-367-292-01	PLATE, FUNCTION, SEESAW	
163	X-3362-790-1	LEVER ASSY, F.R	
164	3-367-302-01	SPRING, P.C	
165	* 3-367-301-01	PLATE, P.C	
166	* 3-367-233-01	RIVETING ASSY, F.R BRACKET (M)	
167	3-367-304-01	SPRING (M), LOCK PLATE	
168	3-367-308-01	SPRING, RELEASE PLATE	
169	* 3-367-300-01	LEVER (M.V), REW	
170	* 3-367-299-01	LEVER (M.V), FF	
171	3-367-298-01	SPRING, F.R LEVER	
172	* 3-367-303-01	LOCK PLATE (M)	
173	* 3-367-305-01	PLATE, RELEASE	
174	3-367-307-01	CORE, T	
175	3-367-306-01	COIL ASSY, T	
176	* 3-367-234-01	RIVETING ASSY, SEESAW PLATE (M)	
S902	1-572-712-11	SWITCH, SLIDE	

(5) MD SECTION-3



Ref. No.	Part No.	Description	Remark
201	* 3-367-294-01	PLATE (M), F.R SLIDE	
202	X-3362-791-1	PLATE ASSY, F.R WORKING	
203	3-367-282-01	SPRING (M), F.R	
204	3-367-290-01	SCREW (T), COLOR	
205	3-367-289-01	ARM (C), TRIGGER	
206	3-367-297-01	SPRING (C), T.A	
207	X-3362-788-1	PLATE ASSY, M.G	
208	3-367-241-01	PLATE (B), E.D	
209	* 3-367-245-01	PLATE, LIFTUP	
210	3-367-240-01	GEAR (M), REVERSE	
211	3-367-235-01	REEL ASSY, T	
212	3-367-239-01	GEAR, E.D	
213	3-367-238-01	GEAR, P.D	
214	3-676-387-00	POLY-SLIDER (DIA.1.6)	
215	3-318-236-01	WASHER, POLY, SLIT	
216	3-367-244-01	CLUTCH ASSY, P	
217	3-367-236-01	GEAR (R), P	
218	3-367-237-01	GEAR (R), F	
219	3-367-243-01	SPRING, T.N	
220	3-367-247-01	SPRING	
221	3-367-246-01	ARM, REVERSE PREVENTION	

Ref. No.	Part No.	Description	Remark
222	* 3-367-242-01	RIVETING ASSY, M.G PLATE	
223	* 3-367-312-01	SWITCH ASSY, POWER	
224	3-367-293-01	SPRING, POWER SWITCH	
225	3-367-286-01	GEAR (M), MAIN	
226	X-3362-824-1	PANEL ASSY, HEAD	
227	3-367-227-01	GEAR, P	
228	3-701-447-11	WASHER, 10	
229	* 3-367-223-01	RIVETING ASSY, HEAD PANEL	
230	3-325-290-21	WASHER, STOPPER	
231	3-367-226-01	METAL, P. GEAR	
232	3-367-225-01	SPRING, P.R	
233	3-367-224-01	ROLLER, SP	
234	3-367-228-01	GUIDE, TAPE	
235	3-367-229-01	PLATE (H), HEAD SP	
236	3-390-757-01	SCREW, ADJUSTMENT, AZIMUTH	
237	* 3-367-272-01	PLATE, MAIN	
238	3-367-274-01	SPRING, H.S	
239	3-367-273-01	SPRING, M.S	
240	* 3-367-222-01	RIVETING ASSY, CHASSIS	
241	3-367-295-01	SCREW (P), COLOR	
HP901	1-543-829-11	HEAD, CERAMIC (PLAYBACK)	

SECTION 5
ELECTRICAL PARTS LIST

BR CONNECTOR | CONTROL

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA...: μA..., uPA...: μPA...,
  uPB...: μPB..., uPC...: μPC...,
  uPD...: μPD...
- CAPACITORS
  uF: μF
- COILS
  uH: μH

Ref. No.	Part No.	Description			Remark
*	1-638-616-11	BR CONNECTOR BOARD			
		**********			
		< CAPACITOR >			
C81	1-163-181-00	CERAMIC CHIP	100PF	5% 50V	
C82	1-163-181-00	CERAMIC CHIP	100PF	5% 50V	
C83	1-163-181-00	CERAMIC CHIP	100PF	5% 50V	
C84	1-163-181-00	CERAMIC CHIP	100PF	5% 50V	
C85	1-163-075-00	CERAMIC CHIP	0.047uF	50V	
C91	1-163-009-11	CERAMIC CHIP	0.001uF	10% 50V	
C92	1-163-009-11	CERAMIC CHIP	0.001uF	10% 50V	
C93	1-163-009-11	CERAMIC CHIP	0.001uF	10% 50V	
C94	1-163-009-11	CERAMIC CHIP	0.001uF	10% 50V	
C95	1-163-009-11	CERAMIC CHIP	0.001uF	10% 50V	
C96	1-163-009-11	CERAMIC CHIP	0.001uF	10% 50V	
C97	1-163-009-11	CERAMIC CHIP	0.001uF	10% 50V	
		< CONNECTOR >			
CNP13	* 1-564-521-11	PLUG, CONNECTOR 6P			
CNP17	* 1-564-519-11	PLUG, CONNECTOR 4P			
CNP18	* 1-564-521-11	PLUG, CONNECTOR 6P			
CNP21	* 1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P			
CNP22	* 1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P			
CNP100	1-580-979-11	PLUG, CONNECTOR 20P			
		< FERRITE BEAD INDUCTOR >			
FB91	1-410-396-41	FERRITE BEAD INDUCTOR			
FB92	1-410-397-21	FERRITE BEAD INDUCTOR			
FB93	1-410-397-21	FERRITE BEAD INDUCTOR			
		< JUMPER RESISTOR >			
JR91	1-249-366-11	CARBON MELF	0	5% 1/5W	
JR92	1-249-366-11	CARBON MELF	0	5% 1/5W	

Ref. No.	Part No.	Description			Remark
*	A-3273-535-A	CONTROL BOARD, COMPLETE			
		**********			
		< DIODE >			
D801	8-719-975-84	DIODE	AY1101W		
D802	8-719-975-84	DIODE	AY1101W		
D803	8-719-975-84	DIODE	AY1101W		
D804	8-719-975-84	DIODE	AY1101W		
D805	8-719-975-84	DIODE	AY1101W		
D806	8-719-975-84	DIODE	AY1101W		
D807	8-719-975-84	DIODE	AY1101W		
D808	8-719-975-84	DIODE	AY1101W		
D809	8-719-975-84	DIODE	AY1101W		
D810	8-719-975-84	DIODE	AY1101W		
D811	8-719-975-84	DIODE	AY1101W		
D812	8-719-975-84	DIODE	AY1101W		
D813	8-719-975-84	DIODE	AY1101W		
D814	8-719-975-84	DIODE	AY1101W		
D815	8-719-975-84	DIODE	AY1101W		
D816	8-719-975-84	DIODE	AY1101W		
D817	8-719-975-84	DIODE	AY1101W		
D818	8-719-975-84	DIODE	AY1101W		
D819	8-719-975-84	DIODE	AY1101W		
D820	8-719-975-84	DIODE	AY1101W		
D821	8-719-975-84	DIODE	AY1101W		
		< JUMPER RESISTOR >			
JR802	1-216-295-00	METAL CHIP	0	5% 1/10W	
JR803	1-216-296-00	METAL CHIP	0	5% 1/8W	
JR806	1-216-296-00	METAL CHIP	0	5% 1/8W	
JR807	1-216-295-00	METAL CHIP	0	5% 1/10W	

Ref. No.	Part No.	Description				Remark
		< RESISTOR >				
R801	1-216-185-00	METAL GLAZE	300	5%	1/8W	
R802	1-216-185-00	METAL GLAZE	300	5%	1/8W	
R803	1-216-182-00	METAL GLAZE	220	5%	1/8W	
R804	1-216-182-00	METAL GLAZE	220	5%	1/8W	
R805	1-216-185-00	METAL GLAZE	300	5%	1/8W	
R806	1-216-185-00	METAL GLAZE	300	5%	1/8W	
R807	1-216-182-00	METAL GLAZE	220	5%	1/8W	
R808	1-216-182-00	METAL GLAZE	220	5%	1/8W	
R809	1-216-185-00	METAL GLAZE	300	5%	1/8W	
R810	1-216-185-00	METAL GLAZE	300	5%	1/8W	
R811	1-216-182-00	METAL GLAZE	220	5%	1/8W	
R812	1-216-182-00	METAL GLAZE	220	5%	1/8W	
R813	1-216-185-00	METAL GLAZE	300	5%	1/8W	
R814	1-216-185-00	METAL GLAZE	300	5%	1/8W	
		< SWITCH >				
S801	1-572-704-21	SWITCH, KEY BOARD (1/DOLBY)				
S802	1-572-704-21	SWITCH, KEY BOARD (2/METAL)				
S803	1-572-704-21	SWITCH, KEY BOARD (3/AMS)				
S804	1-572-704-21	SWITCH, KEY BOARD (4/ATA)				
S805	1-572-704-21	SWITCH, KEY BOARD (5)				
S806	1-572-704-21	SWITCH, KEY BOARD (6)				
S807	1-572-704-21	SWITCH, KEY BOARD (SEEK +)				
S808	1-572-704-21	SWITCH, KEY BOARD (SEEK -)				
S809	1-572-704-21	SWITCH, KEY BOARD (MANU +)				
S810	1-572-704-21	SWITCH, KEY BOARD (MANU -)				
S811	1-572-704-21	SWITCH, KEY BOARD (FM/AM)				
S812	1-572-704-21	SWITCH, KEY BOARD (M. SCAN/A. MEM)				
S813	1-572-704-21	SWITCH, KEY BOARD (MONO)				
S814	1-572-704-21	SWITCH, KEY BOARD (LOCAL)				
**********						
* A-3222-282-A		MAIN BOARD, COMPLETE (US, E)				
		**********				
* A-3222-283-A		MAIN BOARD, COMPLETE (AEP)				
		**********				
		< BATTERY >				
BT401	1-528-225-31	BATTERY, LITHIUM				
		< CAPACITOR >				
C1	1-163-063-00	CERAMIC CHIP	0.022uF	10%	50V	
C2	1-124-589-11	ELECT	47uF	20%	16V	
C3	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V	
C4	1-163-063-00	CERAMIC CHIP	0.022uF	10%	50V	
C5	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V	
C6	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V	

Ref. No.	Part No.	Description				Remark
C7	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C8	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V	
C9	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V	
C10	1-126-163-11	ELECT	4.7uF	20%	50V	
C11	1-124-252-00	ELECT	0.33uF	20%	50V	
C12	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V	
C13	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V	
C14	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V	
C15	1-126-163-11	ELECT	4.7uF	20%	50V	
C16	1-124-464-11	ELECT	0.22uF	20%	50V	
C17	1-124-463-00	ELECT	0.1uF	20%	50V	
C18	1-124-464-11	ELECT	0.22uF	20%	50V	
C19	1-124-463-00	ELECT	0.1uF	20%	50V	
C20	1-137-054-11	FILM	390PF	5%	50V	
C21	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V	
C22	1-124-589-11	ELECT	47uF	20%	16V	
C23	1-163-059-00	CERAMIC CHIP	0.01uF	10%	50V	
C24	1-163-205-00	CERAMIC CHIP	0.001uF	5%	50V	
C25	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V	
C27	1-163-157-00	CERAMIC CHIP	10PF	5%	50V	
C30	1-162-638-11	CERAMIC CHIP	1uF		16V	
C61	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C62	1-163-063-00	CERAMIC CHIP	0.022uF	10%	50V	
C87	1-163-075-00	CERAMIC CHIP	0.047uF		50V	
C101	1-163-010-11	CERAMIC CHIP	0.0012uF	10%	50V	
C102	1-126-301-11	ELECT	1uF	20%	50V	
C103	1-124-584-00	ELECT	100uF	20%	10V	
C104	1-130-485-00	MYLAR	0.015uF	5%	50V	
C105	1-163-075-00	CERAMIC CHIP	0.047uF		50V	
C106	1-163-121-00	CERAMIC CHIP	150PF	5%	50V	
C131	1-126-301-11	ELECT	1uF	20%	50V	
C132	1-126-301-11	ELECT	1uF	20%	50V	
C133	1-131-587-11	TANTALUM	0.68uF	10%	35V	
C161	1-124-257-00	ELECT	2.2uF	20%	50V	
C162	1-163-245-11	CERAMIC CHIP	56PF	5%	50V	
C163	1-126-163-11	ELECT	4.7uF	20%	50V	
C164	1-124-257-00	ELECT	2.2uF	20%	50V	
C170	1-124-584-00	ELECT	100uF	20%	10V	
C171	1-163-245-11	CERAMIC CHIP	56PF	5%	50V	
C201	1-163-010-11	CERAMIC CHIP	0.0012uF	10%	50V	
C202	1-126-301-11	ELECT	1uF	20%	50V	
C203	1-124-584-00	ELECT	100uF	20%	10V	
C204	1-130-485-00	MYLAR	0.015uF	5%	50V	
C205	1-163-075-00	CERAMIC CHIP	0.047uF		50V	
C206	1-163-121-00	CERAMIC CHIP	150PF	5%	50V	
C231	1-126-301-11	ELECT	1uF	20%	50V	
C232	1-126-301-11	ELECT	1uF	20%	50V	
C233	1-131-587-11	TANTALUM	0.68uF	10%	35V	
C245	1-124-589-11	ELECT	47uF	20%	16V	

MAIN

Ref. No.	Part No.	Description			Remark
C261	1-124-257-00	ELECT	2.2uF	20%	50V
C262	1-163-245-11	CERAMIC CHIP	56PF	5%	50V
C263	1-126-163-11	ELECT	4.7uF	20%	50V
C264	1-124-257-00	ELECT	2.2uF	20%	50V
C271	1-163-245-11	CERAMIC CHIP	56PF	5%	50V
C319	1-163-055-00	CERAMIC CHIP	0.0047uF	10%	50V
C320	1-131-343-00	TANTALUM	0.22uF	10%	35V
C321	1-124-252-00	ELECT	0.33uF	20%	50V
C322	1-124-257-00	ELECT	2.2uF	20%	50V
C323	1-124-234-00	ELECT	22uF	20%	16V
C324	1-126-163-11	ELECT	4.7uF	20%	50V
C325	1-163-075-00	CERAMIC CHIP	0.047uF		50V
C331	1-126-157-11	ELECT	10uF	20%	16V
C332	1-124-584-00	ELECT	100uF	20%	10V
C333	1-124-584-00	ELECT	100uF	20%	10V
C334	1-126-157-11	ELECT	10uF	20%	16V
C345	1-126-157-11	ELECT	10uF	20%	16V
C361	1-124-584-00	ELECT	100uF	20%	10V
C362	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C363	1-124-584-00	ELECT	100uF	20%	10V
C391	1-126-163-11	ELECT	4.7uF	20%	50V
C399	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C401	1-124-589-11	ELECT	47uF	20%	16V
C402	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C403	1-163-059-00	CERAMIC CHIP	0.01uF	10%	50V
C404	1-124-471-00	ELECT	1000uF	20%	6.3V
C405	1-124-584-00	ELECT	100uF	20%	10V
C406	1-124-584-00	ELECT	100uF	20%	10V
C407	1-124-229-00	ELECT	33uF	20%	10V
C408	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C409	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C410	1-126-937-11	ELECT	4700uF	20%	16V
C411	1-126-935-11	ELECT	470uF	20%	16V
C412	1-126-157-11	ELECT	10uF	20%	16V
C421	1-124-589-11	ELECT	47uF	20%	16V
C431	1-124-589-11	ELECT	47uF	20%	16V
C432	1-124-589-11	ELECT	47uF	20%	16V
C451	1-126-301-11	ELECT	1uF	20%	50V
C452	1-135-091-00	TANTALUM CHIP	1uF	20%	16V
C601	1-126-162-11	ELECT	3.3uF	20%	50V
C602	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C603	1-124-229-00	ELECT	33uF	20%	10V
C604	1-136-170-00	FILM	0.27uF	5%	50V
C605	1-136-170-00	FILM	0.27uF	5%	50V
C621	1-126-162-11	ELECT	3.3uF	20%	50V
C622	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C623	1-124-229-00	ELECT	33uF	20%	10V
C624	1-136-170-00	FILM	0.27uF	5%	50V
C625	1-136-170-00	FILM	0.27uF	5%	50V
C651	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C652	1-126-163-11	ELECT	4.7uF	20%	50V
C653	1-126-923-11	ELECT	220uF	20%	10V
C701	1-163-164-00	CERAMIC CHIP	20PF	5%	50V
C702	1-163-165-00	CERAMIC CHIP	22PF	5%	50V
C703	1-163-063-00	CERAMIC CHIP	0.022uF	10%	50V
C723	1-163-075-00	CERAMIC CHIP	0.047uF	10%	50V
C726	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C731	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C751	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C752	1-126-163-11	ELECT	4.7uF	20%	50V
C753	1-126-163-11	ELECT	4.7uF	20%	50V
C754	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V

< CONNECTOR >

CNP1	*	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P
CNP2	*	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P
CNP3	*	1-564-509-11	PLUG, CONNECTOR 6P
CNP5	*	1-564-710-11	PIN, CONNECTOR (SMALL TYPE) 8P
CNP6	*	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P
CNP7	*	1-564-508-11	PLUG, CONNECTOR 5P
CNP10	*	1-564-721-21	PIN, CONNECTOR (SMALL TYPE) 5P
CNP31	*	1-564-719-31	PIN, CONNECTOR (SMALL TYPE) 3P
CNP32	*	1-564-719-31	PIN, CONNECTOR (SMALL TYPE) 3P
CNS701	*	1-573-073-11	SOCKET, CONNECTOR 32P

< DIODE >

D1	8-719-987-06	DIODE	WG713A
D2	8-719-987-06	DIODE	WG713A
D3	8-719-987-06	DIODE	WG713A
D4	8-719-987-06	DIODE	WG713A
D5	8-719-987-06	DIODE	WG713A
D6	8-719-987-06	DIODE	WG713A
D7	8-719-987-06	DIODE	WG713A
D301	8-719-987-06	DIODE	WG713A
D341	8-719-110-08	DIODE	RD8.2ES-B2
D361	8-719-110-08	DIODE	RD8.2ES-B2
D401	8-719-987-06	DIODE	WG713A
D402	8-719-987-06	DIODE	WG713A
D403	8-719-109-89	DIODE	RD5.6ES-B2
D405	8-719-921-74	DIODE	MTZN-10A
D406	8-719-110-13	DIODE	RD9.1ES-B2
D407	8-719-987-06	DIODE	WG713A
D408	8-719-987-06	DIODE	WG713A
D409	8-719-109-89	DIODE	RD5.6ES-B2
D410	8-719-987-06	DIODE	WG713A
D412	8-719-974-59	DIODE	1SR139-100
D413	8-719-989-62	DIODE	RL254
D415	8-719-987-06	DIODE	WG713A
D416	8-719-987-06	DIODE	WG713A
D421	8-719-110-13	DIODE	RD9.1ES-B2

Ref. No.	Part No.	Description	Remark
D422	8-719-987-06	DIODE WG713A	
D423	8-719-987-06	DIODE WG713A	
D424	8-719-987-06	DIODE WG713A	
D431	8-719-987-06	DIODE WG713A	
D451	8-719-974-59	DIODE 1SR139-100	
D652	8-719-109-89	DIODE RD5.6ES-B2	
D701	8-719-109-93	DIODE RD6.2ES-B2	
D702	8-719-987-06	DIODE WG713A	
D704	8-719-987-06	DIODE WG713A (US, E)	
D705	8-719-987-06	DIODE WG713A (US, E)	
D707	8-719-987-06	DIODE WG713A	
D708	8-719-987-06	DIODE WG713A (AEP)	
D711	8-719-987-06	DIODE WG713A	
D712	8-719-987-06	DIODE WG713A	
D713	8-719-987-06	DIODE WG713A	
D714	8-719-987-06	DIODE WG713A	
D715	8-719-987-06	DIODE WG713A	
D716	8-719-987-06	DIODE WG713A	
D717	8-719-987-06	DIODE WG713A	
D718	8-719-987-06	DIODE WG713A	
D719	8-719-987-06	DIODE WG713A	
D721	8-719-987-06	DIODE WG713A	
D722	8-719-987-06	DIODE WG713A	
D723	8-719-987-06	DIODE WG713A	
D726	8-719-987-06	DIODE WG713A	

< TUNER >

FE1	1-465-405-11	TUNER UNIT (FM/AM)	

< IC >

IC1	8-759-421-10	IC AN7463S	
IC101	8-759-105-60	IC uPC1228HA	
IC301	8-759-800-71	IC LA2010	
IC331	8-752-050-13	IC CXA1101M	
IC361	8-759-106-02	IC uPC4570G2	
IC601	8-759-242-83	IC TA8221H	
IC701	8-759-154-11	IC uPD1723GF-558-3BE	

< JUMPER RESISTOR >

JR1	1-216-296-00	METAL CHIP	0	5%	1/8W
JR2	1-216-296-00	METAL CHIP	0	5%	1/8W
JR3	1-216-296-00	METAL CHIP	0	5%	1/8W
JR4	1-216-296-00	METAL CHIP	0	5%	1/8W
JR5	1-216-296-00	METAL CHIP	0	5%	1/8W
JR7	1-216-296-00	METAL CHIP	0	5%	1/8W
JR9	1-216-296-00	METAL CHIP	0	5%	1/8W
JR10	1-216-296-00	METAL CHIP	0	5%	1/8W
JR11	1-249-366-11	CARBON MELF	0	5%	1/8W
JR12	1-216-296-00	METAL CHIP	0	5%	1/8W
JR13	1-249-366-11	CARBON MELF	0	5%	1/8W
JR14	1-249-366-11	CARBON MELF	0	5%	1/8W
JR15	1-216-296-00	METAL CHIP	0	5%	1/8W
JR16	1-216-296-00	METAL CHIP	0	5%	1/8W
JR17	1-216-296-00	METAL CHIP	0	5%	1/8W
JR21	1-216-296-00	METAL CHIP	0	5%	1/8W
JR22	1-216-296-00	METAL CHIP	0	5%	1/8W
JR24	1-216-296-00	METAL CHIP	0	5%	1/8W
JR25	1-216-296-00	METAL CHIP	0	5%	1/8W
JR31	1-216-295-00	METAL CHIP	0	5%	1/10W
JR32	1-216-295-00	METAL CHIP	0	5%	1/10W
JR34	1-216-295-00	METAL CHIP	0	5%	1/10W
JR35	1-216-295-00	METAL CHIP	0	5%	1/10W
JR36	1-216-295-00	METAL CHIP	0	5%	1/10W
JR37	1-216-295-00	METAL CHIP	0	5%	1/10W
JR39	1-216-295-00	METAL CHIP	0	5%	1/10W
JR40	1-216-295-00	METAL CHIP	0	5%	1/10W
JR41	1-216-295-00	METAL CHIP	0	5%	1/10W
JR42	1-216-295-00	METAL CHIP	0	5%	1/10W
JR71	1-216-295-00	METAL CHIP	0	5%	1/10W
JR72	1-216-295-00	METAL CHIP	0	5%	1/10W
JR73	1-216-296-00	METAL CHIP	0	5%	1/8W
JR199	1-216-295-00	METAL CHIP	0	5%	1/10W

< COIL >

L1	1-410-184-51	INDUCTOR CHIP 0.22uH	
L2	1-410-513-11	INDUCTOR 22uH	

< TRANSISTOR >

Q1	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q2	8-729-216-22	TRANSISTOR	2SA1162
Q101	8-729-920-08	TRANSISTOR	DTC124TK
Q161	8-729-119-78	TRANSISTOR	2SC2785-HFE
Q201	8-729-920-08	TRANSISTOR	DTC124TK
Q261	8-729-119-78	TRANSISTOR	2SC2785-HFE
Q301	8-729-119-78	TRANSISTOR	2SC2785-HFE
Q302	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q303	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q331	8-729-900-52	TRANSISTOR	DTC114YK
Q345	8-729-920-08	TRANSISTOR	DTC124TK
Q362	8-729-119-78	TRANSISTOR	2SC2785-HFE
Q363	8-729-120-28	TRANSISTOR	2SC1623-L5L6
Q401	8-729-102-14	TRANSISTOR	2SD1021
Q402	8-729-102-14	TRANSISTOR	2SD1021

MAIN

Ref. No.	Part No.	Description		Remark
Q403	8-729-807-12	TRANSISTOR	2SD1802S	
Q404	8-729-205-02	TRANSISTOR	2SA1150	
Q405	8-729-920-68	TRANSISTOR	2SA933S-QR	
Q406	8-729-926-92	TRANSISTOR	DTC124TS	
Q408	8-729-920-68	TRANSISTOR	2SA933S-QR	
Q409	8-729-119-78	TRANSISTOR	2SC2785-HFE	
Q421	8-729-926-92	TRANSISTOR	DTC124TS	
Q451	8-729-900-61	TRANSISTOR	DTA114ES	
Q452	8-729-930-93	TRANSISTOR	2SD1919TL2-QR	
Q453	8-729-920-08	TRANSISTOR	DTC124TK	
Q651	8-729-216-22	TRANSISTOR	2SA1162	
Q721	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q722	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q723	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q726	8-729-120-28	TRANSISTOR	2SC1623-L5L6	
Q751	8-729-924-99	TRANSISTOR	2SC3722K	
Q752	8-729-924-99	TRANSISTOR	2SC3722K	

< RESISTOR >

R1	1-216-216-00	METAL GLAZE	5.6K	5%	1/8W
R2	1-216-150-00	METAL GLAZE	10	5%	1/8W
R4	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R5	1-216-222-00	METAL GLAZE	10K	5%	1/8W
R6	1-216-202-00	METAL GLAZE	1.5K	5%	1/8W
R7	1-216-105-00	METAL CHIP	220K	5%	1/10W
R8	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R9	1-216-097-00	METAL CHIP	100K	5%	1/10W
R10	1-216-075-00	METAL CHIP	12K	5%	1/10W
R11	1-216-097-00	METAL CHIP	100K	5%	1/10W
R12	1-216-085-00	METAL CHIP	33K	5%	1/10W
R13	1-216-097-00	METAL CHIP	100K	5%	1/10W
R14	1-216-091-00	METAL CHIP	56K	5%	1/10W
R15	1-216-099-00	METAL CHIP	120K	5%	1/10W
R16	1-216-081-00	METAL CHIP	22K	5%	1/10W
R17	1-216-073-00	METAL CHIP	10K	5%	1/10W
R18	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R19	1-216-075-00	METAL CHIP	12K	5%	1/10W
R20	1-216-089-00	METAL CHIP	47K	5%	1/10W
R21	1-216-246-00	METAL GLAZE	100K	5%	1/8W
R22	1-216-246-00	METAL GLAZE	100K	5%	1/8W
R23	1-216-249-00	METAL GLAZE	130K	5%	1/8W
R24	1-216-001-00	METAL CHIP	10	5%	1/10W
R25	1-216-089-00	METAL CHIP	47K	5%	1/10W
R26	1-216-174-00	METAL CHIP	100	5%	1/10W
R27	1-216-073-00	METAL CHIP	10K	5%	1/10W
R61	1-216-097-00	METAL CHIP	100K	5%	1/10W
R100	1-216-091-00	METAL CHIP	56K	5%	1/10W
R101	1-216-172-00	METAL CHIP	82	5%	1/8W
R102	1-216-105-00	METAL CHIP	220K	5%	1/10W
R103	1-216-072-00	METAL CHIP	9.1K	5%	1/10W
R104	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R105	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R106	1-216-202-00	METAL GLAZE	1.5K	5%	1/8W
R107	1-216-258-00	METAL GLAZE	330K	5%	1/8W
R130	1-216-081-00	METAL CHIP	22K	5%	1/10W
R131	1-216-081-00	METAL CHIP	22K	5%	1/10W
R132	1-216-230-00	METAL GLAZE	22K	5%	1/8W
R161	1-216-246-00	METAL GLAZE	100K	5%	1/8W
R163	1-216-085-00	METAL CHIP	33K	5%	1/10W
R164	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R165	1-216-049-00	METAL CHIP	1K	5%	1/10W
R166	1-216-085-00	METAL CHIP	33K	5%	1/10W
R170	1-216-158-00	METAL GLAZE	22	5%	1/8W
R171	1-216-049-00	METAL CHIP	1K	5%	1/10W
R172	1-216-230-00	METAL GLAZE	22K	5%	1/8W
R200	1-216-091-00	METAL CHIP	56K	5%	1/10W
R201	1-216-172-00	METAL CHIP	82	5%	1/8W
R202	1-216-105-00	METAL CHIP	220K	5%	1/10W
R203	1-216-072-00	METAL CHIP	9.1K	5%	1/10W
R204	1-216-220-00	METAL GLAZE	8.2K	5%	1/8W
R205	1-216-200-00	METAL GLAZE	1.2K	5%	1/8W
R206	1-216-202-00	METAL GLAZE	1.5K	5%	1/8W
R207	1-216-258-00	METAL GLAZE	330K	5%	1/8W
R230	1-216-081-00	METAL CHIP	22K	5%	1/10W
R231	1-216-081-00	METAL CHIP	22K	5%	1/10W
R232	1-216-230-00	METAL GLAZE	22K	5%	1/8W
R245	1-216-077-00	METAL CHIP	15K	5%	1/10W
R246	1-216-097-00	METAL CHIP	100K	5%	1/10W
R247	1-216-085-00	METAL CHIP	33K	5%	1/10W
R261	1-216-097-00	METAL CHIP	100K	5%	1/10W
R263	1-216-085-00	METAL CHIP	33K	5%	1/10W
R264	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R265	1-216-049-00	METAL CHIP	1K	5%	1/10W
R266	1-216-085-00	METAL CHIP	33K	5%	1/10W
R271	1-216-049-00	METAL CHIP	1K	5%	1/10W
R302	1-216-093-00	METAL CHIP	68K	5%	1/10W
R303	1-249-437-11	CARBON	47K	5%	1/4W
R310	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R311	1-216-081-00	METAL CHIP	22K	5%	1/10W
R312	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R325	1-216-219-00	METAL GLAZE	7.5K	5%	1/8W
R326	1-216-110-00	METAL GLAZE	360K	5%	1/10W
R327	1-216-097-00	METAL CHIP	100K	5%	1/10W
R328	1-216-037-00	METAL CHIP	330	5%	1/10W
R329	1-216-214-00	METAL GLAZE	4.7K	5%	1/8W
R330	1-216-238-00	METAL GLAZE	47K	5%	1/8W
R331	1-216-081-00	METAL CHIP	22K	5%	1/10W
R332	1-216-150-00	METAL GLAZE	10	5%	1/8W
R333	1-216-073-00	METAL CHIP	10K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R334	1-216-222-00	METAL GLAZE	10K	5%	1/8W
R335	1-216-237-00	METAL GLAZE	43K	5%	1/8W
R344	**1-216-295-00**	METAL CHIP	0	5%	1/10W
R345	1-216-073-00	METAL CHIP	10K	5%	1/10W
R346	1-216-085-00	METAL CHIP	33K	5%	1/10W
R347	1-216-198-00	METAL CHIP	1K	5%	1/8W
R361	1-216-013-00	METAL CHIP	33	5%	1/10W
R362	1-216-073-00	METAL CHIP	10K	5%	1/10W
R363	1-216-222-00	METAL GLAZE	10K	5%	1/8W
R391	1-216-073-00	METAL CHIP	10K	5%	1/10W
R400	1-216-222-00	METAL GLAZE	10K	5%	1/8W
R401	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R402	1-216-188-00	METAL GLAZE	390	5%	1/8W
R403	1-216-188-00	METAL GLAZE	390	5%	1/8W
R404	1-216-049-00	METAL CHIP	1K	5%	1/10W
R405	1-216-198-00	METAL CHIP	1K	5%	1/8W
R406	1-216-230-00	METAL GLAZE	22K	5%	1/8W
R407	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R408	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R409	1-216-079-00	METAL CHIP	18K	5%	1/10W
R410	1-216-073-00	METAL CHIP	10K	5%	1/10W
R411	1-216-085-00	METAL CHIP	33K	5%	1/10W
R412	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R413	1-216-077-00	METAL CHIP	15K	5%	1/10W
R414	1-216-079-00	METAL CHIP	18K	5%	1/10W
R415	1-216-029-00	METAL CHIP	150	5%	1/10W
R416	1-216-001-00	METAL CHIP	10	5%	1/10W
R421	1-216-198-00	METAL CHIP	1K	5%	1/8W
R422	1-216-083-00	METAL CHIP	27K	5%	1/10W
R423	1-216-081-00	METAL CHIP	22K	5%	1/10W
R431	1-216-142-00	METAL GLAZE	4.7	5%	1/8W
R432	1-216-142-00	METAL GLAZE	4.7	5%	1/8W
R451	1-216-025-00	METAL CHIP	100	5%	1/10W
R452	1-216-089-00	METAL CHIP	47K	5%	1/10W
R453	1-216-105-00	METAL CHIP	220K	5%	1/10W
R551	**1-216-295-00**	METAL CHIP	0	5%	1/10W
R601	1-216-220-00	METAL GLAZE	8.2K	5%	1/8W
R602	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R603	1-216-041-00	METAL CHIP	470	5%	1/10W
R604	1-249-385-11	CARBON	2.2	5%	1/6W
R605	1-249-385-11	CARBON	2.2	5%	1/6W
R621	1-216-220-00	METAL GLAZE	8.2K	5%	1/8W
R622	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R623	1-216-041-00	METAL CHIP	470	5%	1/10W
R624	1-249-385-11	CARBON	2.2	5%	1/6W
R625	1-249-385-11	CARBON	2.2	5%	1/6W
R650	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R651	1-216-039-00	METAL CHIP	390	5%	1/10W
R652	1-216-202-00	METAL GLAZE	1.5K	5%	1/8W
R653	1-216-091-00	METAL CHIP	56K	5%	1/10W
R654	1-216-097-00	METAL CHIP	100K	5%	1/10W
R701	1-216-222-00	METAL GLAZE	10K	5%	1/8W
R702	1-216-236-00	METAL GLAZE	39K	5%	1/8W
R703	1-216-238-00	METAL GLAZE	47K	5%	1/8W
R721	1-216-254-00	METAL GLAZE	220K	5%	1/8W
R722	1-216-254-00	METAL GLAZE	220K	5%	1/8W
R723	1-216-254-00	METAL GLAZE	220K	5%	1/8W
R726	1-216-105-00	METAL CHIP	220K	5%	1/10W
R728	1-216-097-00	METAL CHIP	100K	5%	1/10W
R751	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R752	1-216-073-00	METAL CHIP	10K	5%	1/10W
R753	1-216-049-00	METAL CHIP	1K	5%	1/10W
R754	1-216-121-00	METAL CHIP	1M	5%	1/10W
R755	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R756	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R757	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R771	1-216-170-00	METAL GLAZE	68	5%	1/8W
R772	1-216-170-00	METAL GLAZE	68	5%	1/8W
R773	1-216-170-00	METAL GLAZE	68	5%	1/8W
R774	1-216-170-00	METAL GLAZE	68	5%	1/8W
R775	1-216-170-00	METAL GLAZE	68	5%	1/8W
R776	1-216-170-00	METAL GLAZE	68	5%	1/8W
R777	1-216-170-00	METAL GLAZE	68	5%	1/8W
R778	1-216-170-00	METAL GLAZE	68	5%	1/8W

< VARIABLE RESISTOR >

RV1	1-238-599-11	RES, ADJ, CARBON 4.7K
RV2	1-238-600-11	RES, ADJ, CARBON 10K
RV3	1-238-599-11	RES, ADJ, CARBON 4.7K
RV101	1-238-602-11	RES, ADJ, CARBON 47K
RV201	1-238-602-11	RES, ADJ, CARBON 47K

< SWITCH >

S701	1-553-510-00	SWITCH, SLIDE (9K/10K) (US, E)

< THERMISTOR >

TH401	1-809-148-11	THERMISTOR, POSITIVE

< VIBRATOR >

X701	1-567-713-11	VIBRATOR, CRYSTAL

****

VOL

Ref. No.	Part No.	Description			Remark
*	A-3273-533-A	VOL BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C141	1-126-163-11	ELECT	4.7uF	20%	50V
C151	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C152	1-163-017-11	CERAMIC CHIP	0.0047uF	5%	50V
C153	1-163-809-00	CERAMIC CHIP	0.047uF	5%	50V
C154	1-131-343-00	TANTALUM	0.22uF	10%	35V
C155	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C156	1-126-162-11	ELECT	3.3uF	20%	50V
C157	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C241	1-126-163-11	ELECT	4.7uF	20%	50V
C251	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C252	1-163-017-11	CERAMIC CHIP	0.0047uF	5%	50V
C253	1-163-809-00	CERAMIC CHIP	0.047uF	5%	50V
C254	1-131-343-00	TANTALUM	0.22uF	10%	35V
C255	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C256	1-126-162-11	ELECT	3.3uF	20%	50V
C257	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C728	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
		< CONNECTOR >			
CNP8	* 1-564-509-11	PLUG, CONNECTOR 6P			
CNP15	* 1-564-710-11	PIN, CONNECTOR (SMALL TYPE) 8P			
CNP16	* 1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P			
		< JUMPER RESISTOR >			
JR351	1-216-296-00	METAL CHIP	0	5%	1/8W
JR352	1-216-296-00	METAL CHIP	0	5%	1/8W
JR353	1-216-296-00	METAL CHIP	0	5%	1/8W
JR354	1-216-296-00	METAL CHIP	0	5%	1/8W
JR356	1-216-295-00	METAL CHIP	0	5%	1/10W
JR357	1-216-295-00	METAL CHIP	0	5%	1/10W
		< TRANSISTOR >			
Q151	8-729-102-14	TRANSISTOR	2SD1021		
Q152	8-729-920-08	TRANSISTOR	DTC124TK		
Q153	8-729-144-85	TRANSISTOR	2SK1133		
Q251	8-729-102-14	TRANSISTOR	2SD1021		
Q252	8-729-920-08	TRANSISTOR	DTC124TK		
Q253	8-729-144-85	TRANSISTOR	2SK1133		
		< RESISTOR >			
R141	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R151	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R152	1-216-075-00	METAL CHIP	12K	5%	1/10W
R154	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R155	1-216-085-00	METAL CHIP	33K	5%	1/10W
R156	1-216-049-00	METAL CHIP	1K	5%	1/10W
R157	1-216-091-00	METAL CHIP	56K	5%	1/10W
R158	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R159	1-216-089-00	METAL CHIP	47K	5%	1/10W
R241	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R251	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R252	1-216-075-00	METAL CHIP	12K	5%	1/10W
R254	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R255	1-216-085-00	METAL CHIP	33K	5%	1/10W
R256	1-216-049-00	METAL CHIP	1K	5%	1/10W
R257	1-216-091-00	METAL CHIP	56K	5%	1/10W
R258	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R259	1-216-089-00	METAL CHIP	47K	5%	1/10W
R727	1-216-246-00	METAL GLAZE	100K	5%	1/8W
R729	1-216-246-00	METAL GLAZE	100K	5%	1/8W
		< VARIABLE RESISTOR >			
RV351	1-241-437-11	RES, VAR, CARBON 50KX4 (LOUD/BASS/TREBLE)			
RV352	1-241-436-11	RES, VAR, CERMET CARBON (POWER/VOL/BAL/FAD)			

****

MISCELLANEOUS

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23	1-590-580-11	CORD (WITH CONNECTOR) (US)
23	1-590-581-11	CORD (WITH CONNECTOR) (AEP, E)
BT401	1-528-225-31	BATTERY, LITHIUM
F1	1-532-452-XX	FUSE, GLASS TUBE (1A)
F2	1-576-075-11	FUSE, GLASS TUBE (8A)
HP901	1-543-829-11	HEAD, CERAMIC (PLAYBACK)
LCD1	1-809-289-11	DISPLAY PANEL, LIQUID CRYSTAL
M901	3-367-276-01	MOTOR ASSY
PL901	1-518-682-11	LAMP, PILOT
PL902	1-518-682-11	LAMP, PILOT
S902	1-572-712-11	SWITCH, SLIDE

****

ACCESSORIES & PACKING MATERIALS

****

	3-336-617-01	BAG, PROTECTION
*	3-367-623-11	CUSHION (UPPER) (L&R)
*	3-367-630-11	CUSHION (LOWER)
*	3-369-698-01	INDIVIDUAL CARTON (US, AEP)
*	3-369-699-01	INDIVIDUAL CARTON (E)
	3-753-046-11	MANUAL, INSTRUCTION (US, E) (ENGLISH, FRENCH, SPANISH, CHINESE)
	3-753-046-41	MANUAL, INSTRUCTION (AEP) (DUTCH, SWEDISH, PORTUGUESE)
	3-753-047-11	MANUAL, INSTALLATION/CONNECTIONS (US, E) (ENGLISH, FRENCH, SPANISH, CHINESE)
	3-753-047-41	MANUAL, INSTALLATION/CONNECTIONS (AEP) (DUTCH, SWEDISH, PORTUGUESE)

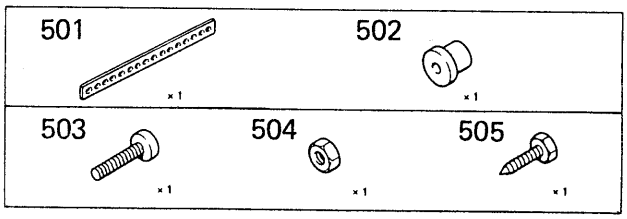
Ref. No.	Part No.	Description	Remark

HARDWARE LIST

#1	7-624-102-04	STOP RING 1.5, TYPE -E
#2	7-624-104-04	STOP RING 2.0, TYPE -E
#3	7-627-554-07	PRECISION SCREW +P 2X2.2 TYPE3
#4	7-627-553-37	PRECISION SCREW +P 2X3 TYPE 3
#5	7-627-554-28	SCREW, PRECISION +P 2X5 TYPE3
#6	7-628-253-10	SCREW +PS 2X5
#7	7-628-253-30	SCREW +PS 2X8
#8	7-628-253-90	SCREW +PS 2.6X4
#9	7-621-770-67	SCREW +PTT 2.6X6 (S)
#10	7-621-771-06	SCREW +B 2X5
#11	7-621-775-00	SCREW +B 2.6X3
#12	7-627-553-38	SCREW, PRECISION +P 2X3
#13	7-682-547-04	SCREW +P 3X6
#14	7-682-550-09	SCREW +B 3X12
#15	7-685-104-19	SCREW +P 2X6 TYPE2 SLIT
#16	7-682-548-04	SCREW +P 3X8
#17	7-621-770-XX	SCREW +PTT 2.6X8 (S)

****

• MOUNTING HARDWEAR



501	3-310-655-01	SUPPORT (ND), FITTING
502	3-349-410-01	BUSHING
503	7-682-583-04	SCREW +P 5X40
504	7-684-025-04	N 5, TYPE 2
505	3-302-126-01	SCREW, TAPPING (DIA. 5X20)

9-956-633-12

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